THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. LII. SATURDAY, MARCH 3, 1888. NO. 9.

ORIGINAL ARTICLES.

A CASE OF LAPAROTOMY FOR RUPTURED UTERUS.[1]

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ON January 21st, about 6 P.M., I was requested by Dr. H. B. McCauley to see a patient who had sustained a rupture of the uterus. The history of the case was as follows:

Mrs. M. D., thirty-two years of age, had had six children, two of which were delivered with the forceps, and she had always, as she said, "had a hard time." The last menstruation had begun on April 14, 1887. A few days before her confinement she had a bad fall in the yard.

Labor pains began during the night between the 20th and 21st of January, and Dr. McCauley was called in at noon of the 21st, at which time he found the os about the size of a dollar, the head presenting, and he noticed an extreme left lateral obliquity of the uterus. He replaced the uterus and put on a binder. The pains were quite moderate. At 4.15 P.M. the waters broke, but there was no advance of the head. At about 5 P.M. she suddenly complained of cramps in the left iliac region and began to get fretful and anxious, but gave no symptoms of shock. Dr. McCauley made an examination and found the vagina full of clots with recession of the head. He gave a hypodermatic injection of morphine and brandy, and applied bottles with hot water to her feet. There was very little hemorrhage into the vagina. The pulse was good. She was now examined by Dr. F. A. Baldwin, who ascertained the presence of an opening in the uterus through which his two fingers passed into the abdominal cavity. A medical student had also examined the patient. So far, no antiseptics were used.

The residence of the patient was a tenement house of very low grade. The apartment consisted of a room looking toward the street, used as a kitchen and sitting room, and two small bedrooms, one without any window, the other with one on the staircase. They were so small that the bed went from wall to wall, and only a narrow passage was left between it and the door communicating with the front room. In that nearest to the stairs I found the patient. She looked anxious and sullen, and it hurt her to change her position sufficiently to render an examination possible. Through the abdominal walls a large child could be felt lying to the right of the contracted uterus. After thoroughly disinfecting my hands, I made a vaginal examination and found the superior strait empty, and a large tear in the uterus communicating with the abdominal cavity. The diagonal conjugate measured four inches, corresponding to a true conjugate of three and a half inches.

After having explained to the patient and her friends that her only chance of life was the performance of laparotomy, obtained the consent of the priest, and got the necessary utensils, which had to be borrowed from all the neighbors, brought together, I performed the operation. Dr. H. B. McCauley gave ether, Dr. F. A. Baldwin assisted me, and Mr. Shannon handed instruments and ligatures.

The pubes were shaved, the abdominal wall cleansed and disinfected with soap and bichloride of mercury. An incision about four inches long was made in the median line, reaching down to the symphysis pubis. The first object that appeared in the abdominal cavity was the placenta, which lay between the anterior wall and the contracted uterus. The membranes were yet in partial contact with the inside of the womb, but were easily removed together with the placenta. The child lay to the right and presented the right nates to the line of incision. It was of large dimensions, probably weighing between nine and ten pounds. It was dead and entirely white in consequence of its exsanguinated condition. The abdominal cavity contained about a quart of fluid blood and some lumps of meconium. After the removal of the child we inspected the rent in the uterus. It comprised the whole anterior wall and part of the posterior. It was eight inches long, and ran chiefly in a transverse direction between the thick wall of the body and the thin cervix. At both ends it turned downward, and on the left side it dipped deep down into the pelvis. On this part the tear in the muscular tissue was situated an inch and a half below that in the peritoneum, the latter forming a triangular flap by itself. All hemorrhage had stopped.

We considered the expediency of performing Porro's operation, but the rent went so low down on the left side that it was impossible to form a pedicle below it and fasten it in the abdominal wall. I, therefore, simply sutured the uterus with silk (boiled in bichloride and kept in alcohol). It was quite difficult to reach the ends of the tear. I laid a double set of sutures, some deep ones comprising the whole wall of the uterus, except the endometrium, and, alternately, between them superficial ones only embracing the peritoneum, which was folded in so as to apply one serous surface to the other. As my assistant needed both his hands to make the tear accessible, he could not help me in folding the peritoneum in, and it became, therefore, neces-

[1] Read before the Obstetrical Section of the New York Academy of Medicine, February 23, 1888.

sary to put in as many as thirty-seven sutures. At the left end of the rent four or five sutures through the muscular tissue were entirely covered with the peritoneal flap, which was fastened to the corresponding edge of the part that had remained in contact with the body of the womb, thus forming a kind of *story suture*. The tube of a fountain syringe was let down to the bottom of Douglas's pouch, and the abdominal cavity washed out with plain warm water, until it returned entirely clear. Then the toilette was made in the common way, and when all was clean and dry, the abdomen was closed by uniting the peritoneal edges separately by means of a running button-hole suture of catgut, and stitching the fascia, muscles, and skin together with interrupted silk sutures. Finally, the uterine cavity was washed out with a hot solution of bichloride (1 : 5000) by means of my glass tube,[1] and an antiseptic dressing with iodoform, gutta-percha tissue, and salicylated cotton placed over the abdomen.

The patient lived four days, when she succumbed to peritonitis. This period does not present much of interest. I shall, therefore, only briefly state that a vaginal douche of a two per cent. solution of carbolic acid was given every three hours. Morphine was given hypodermatically in doses of one-fourth to one-third of a grain, repeated frequently enough to keep her free from pain. She took five grains of quinine every four hours. Her nourishment consisted of milk toast, water, and beef tea, and she was given, on an average, about eight ounces of brandy in the twenty-four hours. After the first twenty-four hours her temperature went up and down between 101° and 103° F., and reached 104° F. just before her death. The abdomen was tympanitic, and she vomited once.

She was nursed in a very unsatisfactory way by her ignorant relatives; once a drunken person visited her, and on another occasion the patient herself got out of bed. It was out of the question to obtain an autopsy, or even to become possessed of the specimen in a surreptitious way.

Rupture of the uterus is fortunately as rare an accident as it is a grave one. Dr. R. P. M. Ames[2] quotes the following figures from reports of large lying-in institutions:

Ramsbotham: Royal Maternity Charity, London,	8 cases in	48,996 deliveries	= 1 in 6124
Lehmann: Maternity of Amsterdam,	3 cases in	7,000 deliveries	= 1 in 2333
Guy's Hospital, London,	9 cases in	43,800 deliveries	= 1 in 4867
Total,	20 cases in	99,796 deliveries	= 1 in 4990

Thus there would come only one case of rupture of the uterus in nearly five thousand deliveries. In the last six years, during which I have been attached to the New York Maternity Hospital, there has been only one case in about three thousand confinements. The above is the first one I have been connected with clinically, but some years ago I made a careful macroscopical and microscopical examination of a specimen that came from a patient of Dr. L. L. Bradshaw, and was shown, by Dr. P. F. Mundé, to the New York Obstetrical Society, to which I then was Pathologist.[1]

Still, infrequent as the accident is, it is by far not so much so as might be inferred from the small number of cases published. R. P. Harris, who computes there must occur about three hundred cases of rupture of the uterus every year in the United States, has been able to collect only forty cases for the period of fifty-two years from 1827 to 1879.[2]

The question of treatment being yet to some extent undecided, it would be very desirable if every single case were published, as has been done of late years with regard to the improved Cæsarean section, laparo-elytrotomy, and Porro's operation. As we shall see later, a comparatively large number of cases have been reported within the last few years, and I have thought it might be of some interest to lengthen the list by the above reported case.

From an etiological standpoint, we notice that the patient had already gone through many pregnancies, this being her seventh confinement. Experience has shown that this is the rule. In earlier pregnancies the muscular tissue may possess strength enough to overcome an obstruction before which it succumbs when impaired by repeated gestations. Some authors have advanced the opinion that a healthy uterus never ruptures, but I can, from my own experience, corroborate the opposite view, for in the specimen on which I reported even a microscopical examination failed to discover any abnormality. Another point that perhaps may have predisposed the patient to rupture, is the fall she made a few days before delivery, but as there were no traces of any contusion or other injury, it is not likely that this factor had much to do with the rupture. No ergot had been given, a drug which seems to be very liable to become the cause of rupture. There was a lateral obliquity of the uterus, but that was remedied by Dr. McCauley. The true cause of the accident is, in my opinion, to be looked for in the disproportion between her pelvis and the child to be born. Her conjugate measured about three and one-half inches. This is a moderate degree of contraction if there was room enough from side to side, which I think there was, although the pelvis was not measured in that respect. Four times she had even given birth to her children by nature's sole efforts, although her

[1] See Garrigues, Practical Guide in Antiseptic Midwifery in Hospitals and Private Practice, 1886. George S. Davis, Detroit, Mich. Pp. 94, 95.

[2] Ames: American Journal of Obstetrics, 1881, vol. xiv. p. 374.

[1] American Journal of Obstetrics, 1881, vol. xiv. pp. 403–406.

[2] Harris: Laparotomy for Rupture of the Parturient Uterus. Ibidem, pp. 816–817.

confinements had always been tedious and painful, and twice she had been delivered by forceps.

Most text-books lay down very precise rules for the different obstetrical procedures only based on the diameter of the pelvis, but when we think of the difference in the size of the fœtus, it becomes almost ridiculous to cavil about a quarter or half an inch difference in a diameter. Living children vary from two to sixteen pounds or more, while there is at best half such a difference in the length of the diameters. The real question the accoucheur has to weigh in his mind is the *proportion* between the child and the pelvis. One of the most difficult confinements I ever had and which was finished with great trouble by means of the cephalotribe and the cranioclast after perforation of the head of the living child, occurred in a lady with an entirely normal pelvis.[1] In the present case, the patient had been able to give birth to six children, but then there came one of unusual size, weighing at least nine pounds, and then the obstacle presented by her narrow pelvis became unsurmountable, and, no other outlet being furnished, her uterus gave way.

The symptoms seem to have been very little marked in this case, as they often are. Indeed, nothing was noticed until she began to complain of pain in the left iliac region, corresponding to the place in which the destruction was most pronounced.

The prognosis in these cases is very bad. The child almost invariably dies, and few mothers escape. It is true Joly has found 100 recoveries in 580 cases;[2] but this gives, of course, an entirely erroneous idea of the true mortality, the successful cases being much more likely to be reported as curiosities or as advertisements, than the fatal ones. The chief cause of death in the mother is hemorrhage, and the second in importance, peritonitis. The child dies, likewise, in consequence of loss of blood, or insufficient supply of blood, or strangulation of important parts in the contracting rent. In our case the appearance of the child showed that it had been drained of its blood. As to the mother, her general condition was favorable. She seemed to be a strong, healthy woman, and there were no signs of shock at the time of the operation. On the other hand, the poor residence, the insufficient nursing, the lack of intelligence in the patient, the omission of antiseptic precautions before the operation, the extension and irregularity of the tear were all circumstances that contended against a favorable issue.

The treatment to be pursued in cases of rupture is a question of the very greatest interest, which, in my opinion, cannot yet be settled. Let us first examine the earlier stages of our case, when a rupture might, perhaps, have been prevented. It would have been impossible to drag this large head through the contracted pelvis by means of the forceps. Turning might have had a better chance, and if it had been tried, and the child's head could not be brought down, it would most likely have come after perforating and emptying the cranium. Perforation of the presenting head of the living child would not have been allowed, the patient being a Roman Catholic, under absolute control of her priest. Contemplating the case in the light of the great success of the improved Cæsarean section, that would have been the operation called for. In that way, I think, both mother and child might have been saved.[1] But there is hardly a doubt that such a proposition would have met with decided protest from the patient and her friends, who would have been guided by the fact that she had borne six children *per vias naturales*.

At the time I saw the patient there could be no doubt about the line of treatment to be pursued. Laparotomy was her only chance. The uterus was entirely empty, the child and the after-birth were in the abdominal cavity, the child was large and the pelvis was small. To attempt delivery through the normal passage would have been sheer madness. To leave her alone was to devote her to sure death within a few hours, or, at best, a couple of days.

When we saw the extension and irregularity of the rent and realized how difficult it would be to suture the lower parts of it, we consulted about removing the whole uterus, and I think I would have done so, if I could have lifted the uterus sufficiently to fasten the pedicle in the wound, but this being found impracticable I undertook the tedious work of patching the torn parts together as best I could, and by using a large number of sutures I succeeded in forming a good line of union. In a case reported by Dr. C. L. Ward[2] there was found a similar peritoneal flap as in my case. He removed it, so as to avoid putting a double line of sutures. Since his patient died as well as mine, the issue cannot be used to decide which procedure is preferable. If we work with aseptic material as I did, I do not see any objection to the double row of sutures, whereas it seems less good to me to leave a large surface of the uterus denuded of its peritoneal covering.

For cleaning a cavity so large and with such power of absorption as the peritoneum I believe plain water is about as good as anything, but others have used bichloride (1 : 10,000) with impunity.

If now we leave out of consideration our particular case and speak about rupture of the uterus in general, there are two chief ways of delivery, the

[1] Reported in Amer. Journ. Obst., 1885, vol. viii., p. 410.

[2] Charpentier: Traité des Accouchements, vol. ii. p. 335. Paris, 1883.

[1] Since this was written, I have performed Cæsarean section in a case of generally contracted pelvis. The mother and the child are in excellent condition.

[2] Amer. Journ. Obst., 1878, vol. xi. p. 587.

one through the parturient canal, the other through the abdominal wall. The third method, that of expectation, or of doing nothing, has had its day, but since the statistics have shown that a recovery under those circumstances is so rare that it comes near being miraculous, this so-called method may be left out of consideration. The way in which nature saved the patients was by the formation of a cyst around the fœtus in the peritoneal cavity, in which it remained a harmless tenant for years, or by suppuration and the expulsion of the fœtus, either entire or piecemeal.

Ever since Trask, of Astoria, N. Y., published his memorable collection and digest of 417 cases[1] of rupture, laparotomy has been regarded by the most advanced obstetricians as the best operation. A similar conclusion was reached by Jolly, of Paris.[2] Trask's work was continued in 1881 by Dr. Ames, of Philadelphia, who tabulated 100 new cases in an excellent paper, and concluded by saying, "I would then strongly urge upon the profession the advisability of performing the operation of gastrotomy after every case of rupture, no matter whether the child had escaped into the peritoneal cavity or not." A similar appeal had already been addressed to the profession a year before by one of its Nestors, the indefatigable R. P. Harris, of Philadelphia, who followed his usual plan of first searching the records of cases in the United States, and then of securing the unpublished ones by correspondence all over the land, in which way he collected forty cases.

A priori there can be no doubt about the superiority of laparotomy over all other methods, and the innocuousness of the operation in itself when performed aseptically has become an everyday experience, but such questions cannot be settled from an aprioristic standpoint, and the statistics are misleading on account of the much greater tendency to publish successful than fatal cases.

Off and on we read yet about cases in which the child was drawn back from the peritoneal cavity, into which it had escaped, and delivered *per vias naturales*, with good result for the mother. In later years, the cavity of the peritoneum has in such cases been washed out with carbolized water and a drainage tube placed through the rent; but even before these methods were known, recovery sometimes took place in cases of this kind. In my opinion, we must be largely guided by the proportion between the size of the child, the rent, and the pelvis. There are many cases on record in which the child was easily removed by turning, but in one like the above reported it would have been impossible to do so without resorting to craniotomy of the after-coming head, or other tedious operations, which certainly would have imperilled her life more than laparotomy.

In the *American Journal of Obstetrics* I have found ten American cases of rupture reported since Dr. Harris's article was published, namely:

1. Uriah H. Farr, Martinsville, Ind. Head in abdomen; legs seized in uterus, extraction. Death from peritonitis. (1883, p. 389.)

2. G. E. Goodfellow, Tombstone, Arizona. Extraperitoneal; breech presentation; blunt hook. Death from peritonitis. (1884, p. 930.)

3. W. E. Forrest, New York. Laparotomy, five or six silk sutures. Death from peritonitis. (1884, p. 1085.)

4. W. R. Gillette, New York. Turning, and easy extraction from abdominal cavity. Recovery. (1884, p. 1087.)

5. H. T. Hanks, New York. Turning, and easy extraction from abdominal cavity. Recovery. (1884, p. 1088.)

6. W. E. Forest, New York. Laparotomy, nine deep, and three superficial silk sutures. Death from peritonitis. (1884, p. 378.)

7. B. F. Baer, Philadelphia. Extraperitoneal; extraction by feet, from abdominal cavity. Death from septicæmia. (1885, p. 585.)

8. W. M. Polk, New York. Extraperitoneal; turning, easy extraction. Death from shock. (1886, p. 494.)

9. Charles Jewett, Brooklyn, N. Y. Laparotomy. Death; cause not stated. (1886, p. 495.)

10. T. Marx, New York. No treatment. Death from septicæmia.

In these ten cases, then, we have eight deaths due to shock, peritonitis, or septicæmia, and only two recoveries, and in both of these cases delivery was effected by turning in the abdominal cavity, and extraction *per vias naturales*, but the ease with which the latter was performed proves there was no disproportion between the pelvis and the fœtal head.

In summing up, Trask states thus the results of different modes of treatment:

	Saved.	Lost	Per cent lost.
Gastrotomy	22	7	24
Turning, perforation, etc. . . .	38	80	68
Abandoned	15	55	78

But my impression is that we will be sorely disappointed if we expect to save 76 out of every 100 cases treated with laparotomy.

If laparotomy is resorted to, I think we ought always to suture the uterus in the way that has proved so beneficial in Cæsarean section, but we cannot expect as good a union on account of the bruised and jagged condition of the edges.

Of late years Porro's operation has in some cases been substituted for simple laparotomy, but of 8 cases so treated only 1 survived[1] This operation

[1] American Journal of the Medical Sciences, 1848 and 1856.

[2] Sur la Rupture de l'Utérus, Thèse de Paris, 1873.

[1] Slawjanski in Annales de Gynécologie, February, 1886, p. 91.

causes so great a shock to the system that even in ordinary cases one-half of the patients succumb. No wonder, therefore, that when performed on a woman who is already worn out by a difficult labor and a rupture of the uterus, it has proved fatal almost every time.

Simple laparotomy causes much less shock when the woman is in a good condition at the time of the performance, and offers the advantage over all vaginal operations that it allows a much more thorough cleansing of the peritoneal cavity and even suturing of the wound, but it is anyhow a capital operation, and added to what the patient has already sustained before it is performed, will often prove too much for her. If extraction through the natural passage can be *easily* effected, be it with forceps, with or without perforation, cephalotribe, cranioclast, or turning, it may yet prove preferable to laparotomy. This can only be decided by a continued investigation of the actual results obtained since the improvements in obstetric practice in general, and especially by scrutinizing the reports of large lying-in institutions in which all cases and their treatment are reported. In cases where great difficulties are in the way of delivery through the normal passage, there can be no doubt about the advisability of performing laparotomy.

SUMMER COMPLAINT.[1]

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THE most striking, undisputed etiological factors of this disease are the time of life, and the period of the year when it is most frequent. The great majority of the cases occur during the first twelve months of life, and nearly all during the first two years. After this age the diarrhœal troubles in the child are not much more frequent than in the adult, and are properly classed as cholera morbus. This same period of life is the period of dentition, and it is usual to ascribe to this physiological function more or less influence in the production of the disease. The connection between the two, however, can only be that of coincidence, not that of cause and effect. If the entire freedom from diarrhœa, during the summer months, of a large number of teething children is not sufficient to overthrow this supposed cause, the fact that it is not operative in cold weather, when children cut teeth as well as during the summer, nor during the second dentition, seems to me to be a complete refutation of the dentition theory.

There is, however, something beside dentition going on during the first two years of life. This is, *par excellence*, the period of growth. At no other period of life is the body-weight, relatively speaking, so rapidly increased. It is, therefore, the period of nitrogenous food. Let us call this the albuminous age of the individual. In this we have one of the general causes of the disease.

Another general or predisposing cause is hot weather. This has been so often shown, and its influence so emphasized by statistics that further discussion of it is unnecessary.

The disease is characterized by suddenness of onset, by frequent stools, and gastric irritation. So is arsenic poisoning. So is poisoning by any gastro-intestinal irritant, whether local or systemic. The only difference between one of the mildest cases and one of the *foudroyant* cases of summer complaint is a difference of degree. Have we not here, then, instances of poisoning? If symptoms are worth anything, we certainly have.

Before attempting to answer this question more particularly, let us consider briefly some of the alleged causes of this disease. We have been told, somewhat dogmatically to be sure, that the only proper food for the infant is milk, and preferably mother's milk. Great efforts have been made to produce mixtures having the exact chemical composition of human milk, as if this would settle the difficult question of infant feeding. In all probability, the chemical composition is only of secondary importance, the main reason for the superiority of mother's milk as a food being undoubtedly its purity, its reception by the child immediately from the breast without contamination from exposure. We have no reason to believe that human milk would be any better food for the child than cow's milk, if fed from a bottle, and under the same septic conditions otherwise as cow's milk. While, therefore, admitting, of course, that breast milk is the best possible food for the infant, I should like to enter a doubt to the broad statement that milk, simply because it is milk, is the best and only proper food for the infant.

We are told that the salivary and pancreatic secretions are absent during the first six months of life, and that, therefore, the child under this age cannot digest starches, and between six months and the year digests starches only with difficulty. When we accept this statement in its entirety, we necessarily shut our eyes to what is going on around us every day, the successful digestion of starches fed to infants by mothers and nurses, the undoubted utility of such foods as arrow-root, and we also forget that diastatic power is not limited to the salivary and pancreatic secretions, and that certain bacteria, normally lodged in the intestinal tract, are capable of changing starches to sugar, and sugar to alcohol. Mellin's and Nestle's foods, even when most carefully prepared, still contain some free starch, but this evi-

[1] Read before the Cincinnati Academy of Medicine, February 6, 1888.

dently does not interfere with their utility. Nevertheless, if we can trace the slightest amount of starchy food in the child's diet, it is the custom to charge it with the causation of the diarrhœa. This is not altogether logical.

Clinical experience has shown that the use of sour milk is frequently followed by diarrhœa. Even the slightest acidity is enough to warrant the rejection of the milk as unfit for food. Probably nobody will claim, however, that it is the acidity itself which makes the milk deleterious, but that the acidity is merely the index of the decomposition which has occurred in the milk. The souring of milk is produced by the action of the lactic ferment and consists principally in decomposing part of the milk-sugar into lactic acid. Some of the casein and albumen is also decomposed into simpler substances, and a small amount of alcohol appears, but is subsequently oxidized to lactic acid. Weak butyric and alcoholic fermentations usually accompany the lactic fermentation. The frequent occurrence of butyric fermentation is especially important. When the butyric fermentation is prominent, putrefaction — that is, fermentation with offensive products—is also present. In lacto-butyric fermentation, the butyric fermentation always follows the lactic, the butyric ferment itself seeming, according to Schützenberger, to require for its nourishment albuminoids in a more advanced change than is necessary for the lactic ferment. If the butyric ferment itself is not the immediate cause of putrefactive change in albuminoids, it certainly prepares them for it, and thus facilitates the decomposition. The butyric ferment, the *clostridium butyricum* of bacteriologists, is widely distributed in nature, but has for its principal habitat sauer-kraut, sour gherkins, old cheese, and rancid butter.

Prof. Victor C. Vaughan, of Ann Arbor, who has investigated a large number of cases of milk and ice cream poisoning, has conclusively shown the cause to be a ptomaine, which he has isolated and named tyrotoxicon. Prof. Vaughan has ascertained that the tyrotoxicon is produced in milk either by the butyric ferment or a ferment always found in connection with it. So that for practical purposes we may regard tyrotoxicon as one of the products of the butyric fermentation of milk.

Physiologically tyrotoxicon produces nausea, vomiting, and purging. Chemically, tyrotoxicon, which is identical with diazo-benzol, is very unstable, and is readily decomposed by exposure to the atmosphere. It gives a deep red color with sulphuric and carbolic acids, and reduces ferric salts. The butyrate, the salt found in poisonous milk and cheese, forms needle-shaped crystals, and a potassium compound forms flat hexagonal crystals.

Tyrotoxicon is the only ptomaine which has yet been isolated from milk and milk products, and its physiological effects are identical with the symptoms of summer diarrhœa. Vaughan has reported (THE MEDICAL NEWS, vol. l. p. 673) one case of summer diarrhœa treated by him in which he found tyrotoxicon in a specimen of milk obtained the same day from the same animal as the milk fed to the child immediately before the attack.

We are now prepared to admit tyrotoxicon as a cause of summer diarrhœa, the evidence supporting this view being much stronger than any yet brought forward in favor of other alleged causes. But whether tyrotoxicon is the only ptomaine concerned in its production is not so clear. When we consider the albuminous nature of the food of the infant, and that all ptomaines are nitrogenous bases formed in the decomposition of albuminoids, and that the temperature at which the disease makes its appearance is the one most favorable to the maintenance of all fermentations, and that large numbers of various kinds of bacteria are constantly in the intestines, the possibility of other ptomaines being concerned must be considered. From clinical studies, I am inclined to believe that tyrotoxicon is not the sole cause, though a frequent one, but that there are other ptomaines and other chemical products concerned.

During the past summer, at the College Clinic, at the Home for the Friendless and Foundlings, and in private practice, I treated upward of two hundred cases of summer complaint, and it is upon the consideration of these cases that the present observations are based.

Fever is a puzzling symptom in these cases. It is present in *foudroyant* cases, and in a few of the milder ones. Why is there such irregularity in so important a symptom? Possibly in the febrile cases there is an additional ptomaine capable of paralyzing the inhibitory heat centres.

The greatest interest centres in the stools. Stools are large and watery with but little solid contents, and said to be from the small intestine, or they are small and not watery, and said to be from the large intestine. In addition, stools from the small intestine are usually accompanied by wind and pain immediately before the stool, and are shot out from the bowel with considerable force. Large intestine stools contain mucus, occasionally blood, are passed with straining, and are accompanied by pain during and after the stool. Not infrequently stools combine the characteristics of these two classes. In addition there are stools which cannot be ascribed to either of these categories; they are relatively large, soft, but not watery, and contain a great deal of mucus. The description of minor differences between stools cannot be attempted here. Owing to their incomplete character, stools from the large intestine are usually more frequent than those from the small intestine.

In color, stools vary considerably, but particular

attention should be directed to the green and the brown stools. Hayem has shown that the green stools owe their color to the presence of a chromogenic bacterium. The brown stools also probably belong to a similar category. Upon the odor of the stools they may be divided into two, possibly three, distinct classes. The odor is either putrid, sour, or the normal fecal odor intensified.

Following this, the proper clinical classification of this disease seems to be: 1. Cases in which the intestinal fermentation is putrid. 2. Cases in which the intestinal fermentation is acid.

Cases in which the odor of the stools is not distinctly putrid, but strongly fecal, belong to the first class, because as has been shown by Nencki, skatol, which imparts to normal feces their odor, is the product of fermentation resembling, if indeed it is not, true putrefaction.

It is not difficult to understand how the bacteria causing the fermentations gain access to the intestine. They may be taken down by food already tainted, or by perfectly pure food. On the contrary, when we come to consider the matter, we find that the greatest difficulty is to keep them out. Given a putrid fermentation started in the intestine, the constant ingestion of albuminous food by the infant supplies the means of keeping it up, and the surrounding conditions of heat and moisture make the intestine the best culture ground imaginable. It would be wonderful indeed, if, under these conditions, some ptomaines capable of producing physiological effects were not produced. We must not forget that the ptomaines are all alkaloids, and, like the vegetable alkaloids, some produce poisonous effects, and some do not. The ptomaine or ptomaines most frequently produced under these circumstances act like hydragogue cathartics. Others act on the large intestine more particularly. Possibly some are concerned in the production of fever.

During the early part of last summer, considerable difficulty was experienced in treating the cases of summer complaint at the Home of the Friendless. They recovered slowly and relapses were very frequent. The ventilation of the nursery was bad, and could not be improved. In looking around for a cause, it was found that the soiled diapers were thrown into a bag which hung under one of the windows. This arrangement was immediately changed. The bag was dispensed with, and the soiled diapers immediately after their removal were thrown into a tub containing a solution of mercuric chloride, and placed in the yard below, as far as possible from the nursery.

The other conditions remained unchanged, but the good effects of this move were immediately noticed. The cases improved as rapidly as could be expected, and spreading of the disease diminished. Favorable reports were also received from the laundry maids, who no longer objected to cleaning the diapers, as they were entirely free from offensive odors.

Another instance illustrating the infectious character of the trouble, and also one of its variations, is worth relating. Two infants were received at the same time at the Home of the Friendless, from the Home for Sick Children. Both these children had summer complaint, but the kind of stools that they were having were new at the Home of the Friendless. Their stools were large, soft, but not at all watery, contained a large quantity of mucus, were brown in color, had little nodules like sago grains scattered through them, and in odor the most offensive I have ever met. In a few days this kind of stool was no longer a novelty at the Home of the Friendless, three or four of our older residents having acquired that form of the disease, and considerable trouble was experienced in stamping it out. These stools seemed to indicate a different species of the disease from what we had previously had at the Home.

In the diarrhœas having acid stools it seems that the intestinal fermentation is acetic, lactic, or butyric, and that the substances acted upon are the starches and sugars. From these bodies ptomaines cannot be produced, and we can only account for the diarrhœa by the local irritation of the acid products themselves.

The only fatal case which I saw last summer was a *foudroyant* case at the Home of the Friendless.

The little patient, Gertrude, was two months old, and had been brought into the house when two days old. She was taken suddenly with vomiting, about midnight, and between then and morning had six stools, the first of which were normal, but the others were thin, watery, slimy, yellow in color, sour and offensive in odor. During this time she was given about two ounces of boiled milk with lime water, which she retained. When seen in the morning, she was pallid, wakeful but not crying, lips and tongue constantly moving, eyes and fontanelles sunken, pupils contracted, and temperature 100°. All food was stopped, and she was put on whiskey and salol. By afternoon only one stool had been passed, and this was like the others, except that the odor was putrid. No urine since morning. Gin ordered in place of whiskey and boiled water at short intervals.

By 9 P.M. the stools had lost their offensive odor. At 5 o'clock the next morning the temperature had reached 101.4°; pupils still contracted, and still no urine. By noon she had passed a small quantity of urine, and the stools, though watery, were not offensive. Her general condition, however, was very bad. Small quantities of breast milk were cautiously administered, but without success, the child dying at 6 P.M, forty-two hours after the commencement of the attack. During the last few hours she vomited once, and had several slight convulsions.

At the autopsy, made eighteen hours after death, the following was found: Post-mortem rigidity had

disappeared; it had at first been quite marked. Marked hypostatic congestion. Fingers clenched, abdomen distended. On opening the abdomen the odor was less offensive than usual, and not at all putrid. Both intestines prominent from gaseous distention, and very pale. Slight arborescence of the mesenteric vessels. Peritoneal cavity dry. The small intestine contained a small quantity of a murky yellow liquid, neither sour nor putrid in odor. The mucous membrane was very pale, except one spot about four inches long, where there was marked hyperæmia of the vessels, and redness of a Peyerian patch. Kidneys rather pale on the whole, but with red points on the cortex, and marked striation in pyramids. Liver bloody, and very friable. Bladder empty. Lungs normal, except hypostatic congestion. Heart normal. Pleural and pericardial sacs dry. Brain not examined.

Had this patient been of good stock, instead of being a foundling, she would probably have recovered. The autopsy showed clearly that all putrefaction in the small intestine had ceased, and that it was again fitted to receive albuminous food, but the little one's strength had been so far sapped that she could not rally. The suppression of urine, and the convulsions showed that so-called uræmia was present. How far this was concerned in producing the final result need not be discussed here, but it should be noted that the secretion of urine had recommenced.

Symptoms on the part of the nervous system are very common in summer complaint. The pupils are sometimes dilated but more frequently contracted. Formerly when employing the opium treatment of this affection, I thought that this symptom was due to the small doses of that drug employed. But having frequently observed it since when no opium had been administered, I am constrained to attribute it to another class of alkaloids.

In two cases seen at the clinic, and one in private practice, the following conditions were observed: In each case the child had been sick for several days with the diarrhœal symptoms of summer complaint, when it was suddenly taken ill in a different way, drowsiness, amounting to coma coming on, pupils contracted, respirations slow and shallow, and pulse very weak, and urine diminished, in each case the child seeming to be almost in collapse. In none of these cases had there been any opium given. It was evident here that the poison producing these symptoms had been already absorbed and should be eliminated. In each case an alkaline diuretic, potassium nitrate, was administered together with large quantities of water, and in each case, within four hours, a large amount of urine was passed, and all the grave symptoms completely disappeared.

It is a frequent occurrence to find a child with three or four watery stools daily, and weak, depressed, peevish, uncomfortable, evidently sick, and to find that same child on the following day, after he has had eight or nine watery stools, bright and cheerful, and evidently comfortable. The conclusion is obvious, frequency of stools is not in itself a cause of general depression. The cause of the depression is back of the stools and must be sought in the cause of the stools—that is, in the general cause of the whole condition.

Cases are occasionally met with in which there is some putrefaction in the intestine, nervous symptoms such as have been already described, and a condition of constipation instead of diarrhœa. These cases it seems proper to class under the head of summer complaint. A certain proportion of the acute diarrhœal cases become chronic. The prime cause in promoting this condition, seems to be a diet capable of prolonging the pathological fermentations, and sooner or later structural changes are produced in the intestinal mucous membrane.

In treating these cases, six objects should be kept in view:

1. The bowels should be cleared as far as possible of the fermenting masses giving rise to the trouble.

2. Substances capable of undergoing the same pathological fermentations, and therefore capable of sustaining the process, must be withheld from the patient.

3. Efforts should be made to finish by antisepsis the work left undone by the cathartic.

4. Elimination of the chemical products which have been absorbed and are producing undesirable physiological effects, should be hastened.

5. Special symptoms must occasionally be combated.

6. The stools should be carefully disinfected.

As the preliminary cathartic, the domestic remedy, castor oil, often produces excellent results, but I prefer calomel. It is certain in its action, not unpleasant to take, and possesses antiseptic properties of a high grade.

Food.—In the most severe cases, no food should be given except brandy or whiskey, for one or two days. Ordinarily it is necessary to give some food. In those cases in which the intestinal fermentation is of the putrid type, albuminous food must be withheld. Sometimes one albuminoid will be borne, when another will not. For instance, if the putrefaction has started with milk as a food, and this is usually the case, beef tea or chicken broth occasionally agrees with the patient, but their use is attended with considerable risk, and in severe cases should not be attempted. When it becomes necessary to exclude milk, breast milk should not be made an exception.

When all abuminoids are cut off, a very valuable food may be prepared by filling a bag with flour, and boiling the whole in a pot of water. The dry cooked flour in the centre of the ball is well borne

by the child. This is an old time preparation, and is not yet ready to be discarded. I have used with some success, a food prepared by thoroughly boiling crackers, and when the mixture has cooled down to about 100° F., treating the mixture with "Maltine." This cracker food is not entirely free from nitrogenous constituents, the crackers containing about twelve per cent. of albumen, but it has a practical value which overcomes this theoretical objection. As a test of this food, before the hot weather came on last summer, I put a five months foundling upon it, and kept her on this food exclusively for four weeks. At the end of this time she had gained slightly in weight, notwithstanding the fact that she was syphilitic to the degree that she had suffered destruction of the bones of the nose, and had a gumma. This was proof enough that life could be supported on it through a short period.

When the intestinal fermentation is of the acid type, the food to be allowed is not so easily found. The sugars and starches must be withheld. Milk, ordinarily classed as an albuminous food, contains sugar, and if administered under these circumstances not only feeds the acid fermentation, but soon adds to it an additional putrid fermentation. This change is frequently observed clinically, and seems to be due to the occurrence of the lactobutyric fermentation. Beef tea, animal broths free from starches, and peptones, are the only safe foods to give under these circumstances.

Antisepsis.—Thus far I have been somewhat disappointed in the results of intestinal antiseptics, and must class them as inferior in importance to the preliminary cathartic, and to the proper selection of diet in these cases. They play an important role, but not the most important role in the management of summer complaint. In this connection I wish to call attention to the very valuable paper of Dr. L. Emmet Holt, on "The Antiseptic Treatment of Summer Diarrhœa" (*N. Y. Med. Journ.*, Jan. 29, 1887). With the statements of Dr. Holt's paper I can heartily agree, except as to a few minor and relatively unimportant matters. As intestinal antiseptics, I confined myself last summer to mercuric chloride and salol. This latter substance, which is said to be decomposed into salicylic and carbolic acids after reaching the small intestine, would seem to be particularly adapted to intestinal antisepsis. On the contrary, I found it rather uncertain in its action, occasionally doing all that could be expected, but much more often not. It is usually absorbed as salol, and patients using it soon exhale from their whole bodies its peculiar odor.

Mercuric chloride is not satisfactory, except when given in injection in rectal troubles.

With the other antiseptics I have, as yet, no experience in this disease.

I wish to lay particular stress upon the use of diuretics. Their value in severe affections is sufficiently shown by the cases already mentioned, but in milder cases they play an important role in controlling or alleviating certain nervous symptoms. The alkalies and water form the best diuretics for this purpose.

Pain, when severe, must be met with opium. Opium, with bismuth, is again indicated when the number of watery stools becomes so great as to endanger life, but this condition, I think, arises only rarely. Free purgation is essential to the treatment of this disease on the plan herein indicated, and the opium treatment cannot be consistently employed with it. With the opium treatment of the disease it is very easy to control quickly all the symptoms and make the case at once present a much improved appearance, but the good result is more apparent than real, and the old train of symptoms soon sets in again.

In conclusion, that to which I wish particularly to direct attention, is:

1. The recognition of the two forms of pathological intestinal fermentation met with in summer complaint, and the classification of the cases in accordance therewith.

2. The selection of diet based upon this classification.

3. The use of diuretics in cases of summer complaint presenting undesirable symptoms on the part of the nervous system.

4. Disinfection of the stools.

FOREIGN BODY IN THE BLADDER: REMOVAL BY MEDIO-LATERAL CYSTOTOMY.

BY ALBERT L. GIHON, M.D.,
MEDICAL DIRECTOR, UNITED STATES NAVY.

THE paper read by Dr. DeForrest Willard before the Philadelphia County Medical Society (THE MEDICAL NEWS, November, 1887) on the removal of foreign bodies from the urethra and bladder, and the cystotomy, performed for this purpose, reported by Dr. W. W. Keen to the same body (THE MEDICAL NEWS, January 14, 1888), may cause the recital of the following case to have a pertinent interest:

D. D., oiler, native of Ireland, aged thirty-one years and five months, admitted into U. S. Naval Hospital, Mare Island, California, from U. S. Ship "Marion," November 1, 1887, as with "foreign body in bladder." The hospital ticket contained the following history of the case:

"On September 18th, presented himself saying that four days before (September 14th) he had passed a pine stick (thickness of a Faber lead-pencil and 4¼ inches in length) into his urethra. He attempted its removal with a gimlet and broke 1¼ inches from further end of stick, which entered his bladder. After suffering agony for four days and frequent severe chills, he revealed his condition;

after which the stick (three inches of it) was removed by perineal section. In fifteen days, the perineal wound healed, but about half of the scrotum sloughed away with great fetor. Nature repaired this loss and he is apparently well, but the fragment of stick yet in his bladder is causing pain, hemorrhage, and stoppage of urine. He is sent to hospital to have this foreign body removed."

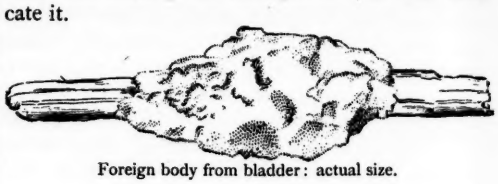
On admission to hospital he entered the service of Passed-Assistant Surgeon Norfleet, from whose notes the following clinical history is collated:

Patient states that there is a stick an inch and a quarter long in his bladder, which sometimes arrests the flow of urine during micturition, and toward the latter part of the act blood is passed; suffers pain only at neck of bladder; wound resulting from former operation almost healed, leaving only a small citatrix behind the scrotum, about an inch anterior to the bulb; no evidence of loss of soft parts by sloughing; foreign body readily discovered in the bladder by bougie à boule.

November 29. Patient was put under ether by Passed-Assistant Surgeon Lewis, and Medical Director Gihon, assisted by Passed-Assistant Surgeon Norfleet, Assistant Surgeon Harris, and Drs. Mathis and Fallier, of the French Navy, performed median cystotomy, reaching the bladder without difficulty, but it was found impossible to extract the foreign body and the median was changed to lateral (left side). The foreign body was found lying crosswise superiorly and could not be grasped at once, but after much manipulation and pressure above the pubes it was finally seized with the forceps and extracted. It proved to be a piece of penholder, *three and a quarter inches long*, incrusted with phosphates, forming an irregularly spindle-shaped mass, with three-fourths of an inch of the stick projecting at each end, one of these ends being broken and jagged. The incrustation was one and three-quarters of an inch long and three-quarters of an inch in diameter at its thickest part, and very rough. The operation lasted two hours and a half, and was attended with a great deal of hemorrhage. By the following morning most of the urine passed through the urethra, and by December 12th the wound was almost healed, no urine issuing through it, and a good stream passing through the urethra not oftener than in health.

December 16. Discharged from hospital, not one unfavorable symptom having occurred, and no other antiseptic precautions having been observed than the immersion of the instruments and rinsing of operator's hands in a 1 : 2000 solution of mercuric chloride.

The figure represents the size and appearance of the foreign body, which were unexpected in view of the positive statement of the medical officer signing the hospital ticket, at the transfer of the patient, that only one and one-quarter inches of the stick had passed into the bladder. Its spindle-shape caused the body to lie transversely just beyond the reach of the forefinger after the dilatation of the wound to its extremest possible extent, where it rotated upon its axis, thus eluding the attempts to seize and extricate it.



Foreign body from bladder: actual size.

Notwithstanding the success of the operation and the healing of the wound without drawback, after the necessarily severe and protracted manipulations, I still regret that I had not adhered to my original intention of opening the bladder above the pubes, which the size and shape of the incrusted stick and the very great difficulty attending its extraction prove to have been the proper procedure.

The case is here reported as evidence of the preference which should be given the high operation under similar circumstances.

HOMATROPINE HYDROBROMATE.

A Study of its Clinical Value in Ophthalmology.

BY JOHN S. STEWART, M.D.,
OF PHILADELPHIA.

In an endeavor to bring this subject unbiassedly before the profession, the author has carefully gone over all the current literature, and extracted what seems correct. These researches he has embodied in the present paper, and from them drawn certain conclusions.

ACTION ON THE CILIARY MUSCLE.

First. Single instillations of either the one-twentieth or the one-fortieth of a grain of homatropine hydrobromate are insufficient to paralyze the accommodation (Oliver).

Second. Repeated instillations will paralyze the accommodation. The minimum amount thus found to be capable of producing *complete* paralysis of the ciliary muscle in an emmetropic eye is the one-fifteenth of a grain, in two instillations of the one-twentieth and the one-sixtieth of a grain each, the latter quantity being instilled at the time of the former's greatest intensity of action (thirty-two minutes after the first instillation).

Third. The maximum amount of the drug recommended and used in repeated instillation for the purposes of examining refraction, so far as has been reported, is a solution of gr. xxiv to the f℥j, two to three instillations being required in most cases to paralyze completely the accommodation.

Fourth. Complete paralysis of the ciliary muscle following single or repeated instillations is found to be established in from twenty to ninety minutes, the time depending to a great extent on the amount of the drug used.

Fifth. Careful study of some of the reported cases

where a sufficient amount of the drug had been used to paralyze the ciliary muscle, distinctly shows that the fine distinction of astigmatic angles and the estimation of degrees of astigmatism were not positive, and, in some of the reported cases where other mydriatics were afterward employed, varying amounts of ametropia could be found in excess of what had been measured when the homatropine was used.

Sixth. The duration of the local paralysis is variously estimated to be from thirty minutes or longer to several hours.

Seventh. In cases where the loss of ciliary power was complete, the muscle regained its full action in from ten to seventy-two hours—the time being directly dependent, in the majority of cases, on the amount of the drug used.

ACTION ON THE IRIS.

First. Single instillations of the one-twentieth of a grain of hydrobromate of homatropine, in the majority of cases, are capable of producing complete mydriasis; whilst it is impossible to obtain maximum dilatation by means of single instillations of one-fortieth[1] of a grain (Oliver).

Second. Repeated instillations cause maximum dilatation of the pupil in the majority of cases. Keyser has observed that the weaker instillations of the drug do not dilate *ad maximum*, whilst the stronger ones, by the irritation which they produce, occasionally cause antagonistic action in the circular fibres of the iris, the result being some contraction of the pupil.

Third. The return to normal of the pupillary diameter is found to take place in thirty and fifty hours respectively after single instillations of the one-fortieth and one-twentieth of a grain are made. The time given by Völckers after the instillation of a one per cent. solution is from twelve to twenty-four hours.

ACTION ON THE CONJUNCTIVA.

First. Single instillations of either the one-fortieth, or the one-twentieth of a grain of an absolutely neutral salt are not productive of conjunctival irritation (Oliver).

Second. Repeated instillations cause irritation and hyperæmia of the conjunctiva (Schell, Keyser, Oliver, Jackson and others).

Third. In a few instances, as noticed by Keyser,[2] and others, acute conjunctivitis has followed repeated instillations of the drug, especially of the stronger solutions.

ACTION ON THE INTERIOR OF THE EYE.

A certain amount of choroido-retinal irritation, accompanying the use of homatropine has been observed by Risley and others.

ACTION ON THE GENERAL SYSTEM.

First. Tweedy and Ringer have shown the special action of homatropine to be on the nerve centres, especially the spinal cord. The effect on the heart, as found by them and observed by Hare, was slowing, accompanied by irregularities of force and rhythm.

Second. Toxic symptoms never follow single instillations of minimum amounts of the drug.

Third. Repeated instillations of the quantities noted by the various authors are not frequently accompanied or followed by constitutional disturbance, the few such cases reported being limited to "hallucinations," "incoherency of speech," "drowsiness," "intoxication."

CONCLUSIONS.

First. Single instillations of less than the one-fifteenth of a grain of hydrobromate of homatropine are of no value for the correct estimation of ametropia.

Second. On account of the quick return of the ciliary power and normal size of the pupil after single instillations of the one-fortieth of a grain or less, of hydrobromate of homatropine, this drug is extremely useful in cases where an accurate ophthalmoscopic examination of the media and fundus of the eye is desired.

Third. As a single instillation of an absolutely neutral salt does not act as an irritant, the drug may be thus employed for purposes of precision, even in cases where local irritation exists.

Fourth. On account of the constant local irritant action of repeated instillations of hydrobromate of homatropine, this drug may be considered harmful in certain cases of inflammatory disease, or traumatic lesion of the ocular coverings and tunics.

Fifth. The fact of the constant irritant action of repeated instillations of homatropine hydrobromate on the deeper tunics of the eye, the choroid, and probably to a certain extent the retina, gives answer in great measure why ametropia cannot be properly estimated; hence the drug should be avoided in the correction of refractive error.

I here desire to express my thanks to Dr. Charles A. Oliver for many valuable suggestions and assistance given in the preparation of the present paper.

1617 ARCH STREET.

[1] Hotz claims to have obtained complete dilatation by the instillation of a single drop of a one-half per cent. solution.

[2] In a recent article this author states that the use of a perfectly neutral salt, "thoroughly washed from all free acid," does not cause the irritation he first observed.

THE TOPICAL APPLICATION OF OIL OF TURPENTINE TO RECENT WOUNDS,

With Observations Relating to the Germ Theory of Disease.

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FROM the very interesting paper in THE MEDICAL NEWS of November 19, 1887, page 601, in reference

to Holmfeld's experiments with the oil of turpentine, we learn that for some hours after the application of oil of turpentine to various kinds of germs, and particularly to fresh colonies of *micrococcus prodigiosus* and *staphylococcus*, its effects on their life and growth are *nil*. Hence it is evident that turpentine, unless applied in large amounts for a considerable time, produces no sufficient effect to encourage our use of the drug for the purposes of antisepsis.

The writer has for many years applied the oil of turpentine in almost every case of external injury involving a solution of continuity of hard as well as of soft parts, with the effect of preventing suppuration and sepsis, and hastening the process of repair. For example, a recently maimed hand or foot is presented, in which certain tissues, integuments, muscles, nerves, bones, etc., are involved to an extent a little short of necessitating amputation. After the removal of all foreign bodies, every fragment of bone and necrosed tissues, and other parts likely to die, effusions of blood are stopped, and every visible clot is cleared away, and after free lavation with hot water —about 101° F. — the parts made as dry as possible by a clean, soft sponge, are properly adjusted and covered with pledgets of lint or absorbent cotton saturated with the oil of turpentine; adhesive plaster may now be useful or necessary, and a careful application of a muslin roller bandage completes the first dressing. A compound of two parts of oil of turpentine and one of linseed oil, thoroughly mixed, is now applied over the site of the wound to repletion, and reapplied at certain intervals, so as to keep it constantly saturated. By this manner of dressing, the wound will remain free from indications of putrefaction for an indefinite time. I have known this dressing, in the case of an amputated finger, to be retained nine days, and when removed emitted no other odor but that of the turpentine and linseed oil, and the cut surfaces had united by first intention.[1]

In all my amputations I now use animal ligatures, and cut them off near the knot, the flaps or incised surfaces are brought together with care, and retained by adhesive strips, without *the aid of stitches*, and supplemented by muslin rollers carefully and neatly applied, with excellent results. The manner of using adhesive plaster is of no little moment, for either of the extremities; for an arm or a leg, the strips should be cut nicely even, one-half an inch in width, and long enough to extend four or five inches on both sides of the base of the flaps; a strip about five inches wide should encircle the stump so as to embrace the ends of the narrow strips neatly. Of course, the length and breadth of the strips are varied according to circumstances. Treated by sealing in this way hermetically, as it were, other wounds besides those of amputation are not only "unmistakably safe," but the reparative process is absolutely favored. The following cases very well illustrate the results of the treatment of wounds and amputations above indicated:

CASE I. — William S., aged thirty-five years. Amputation of the arm necessitated by a gunshot wound of the hand and forearm, which was attacked by gangrene. The amputation wound united by first intention, under the turpentine dressings; but at the inner part of the *cicatricial* line it healed by granulation, while the other part healed by first intention. This difference in result is explained by the fact that although the wound had healed along the entire line, showing a nice narrow cicatrix, a few weeks afterward a small abscess formed near the inner point of the line of union, and terminated in a little sinus, through which a spicula of bone soon made its way out, leaving a healthy but rather ugly scar.

CASE II.—John H., aged thirty-two years. Partial amputation of the hand. In the act of coupling railway cars, all the fingers from their ends up to the metacarpo-phalangeal articulations were literally *mashed*, and two lacerated wounds appeared, but little jagged, extending from near the wrist longitudinally and parallel to one another, through the palmar integument, down to the fascia, and out to the mashed fingers. Of course amputation was inevitable, and I operated through the distal third of the phalanges of the metacarpal bones, and obtained excellent flaps. Five or six vessels were ligated with animal ligatures cut off near the knots. The flaps were carefully brought together and held in coaptation by narrow adhesive strips and a roller bandage. The oil of turpentine had its place in a strip of lint, over the amputation wound before the bandage was applied, and the compound of turpentine and linseed oil came in for its share of usefulness. The dressings were allowed to remain intact ten days, and when removed the wound was found cicatrizing nicely, and in less than another ten days was well, in spite of irregular habits and whiskey. The thumb is now useful, and a *sine qua non* in his daily work.

CASE III.—William R., aged fifteen years. Lacerated wound of the index finger of the right hand, by gunshot. The parts of the member hung together by a few muscular fibres, tendons, etc., and all of the middle third of the bone had been carried away except a few splinters. I had determined to amputate, but the boy plead so earnestly that an effort should be made to save it, and, on reflection, considering that a few bundles of muscular fibres and tendons were intact, and that a branch from the *arcus sublimus* was in continuity, I yielded, and dressed the wound carefully in my usual way. Repair was completed in about three weeks, and the patient had a useful and by no means an ugly finger.

Now, what are the relations of this practice to the germ theory? Why do not wounds under the treat-

[1] The oil of turpentine prevents the free exudation of serum, which generally flows for some time after amputation, and always deprives it of putrefactive and irritating qualities.

ment indicated suppurate? Why do they not have the odor of putrefaction? Why do they heal kindly and speedily?

I shall not essay to answer these questions, because the attempt would involve a discussion beyond the limits of this paper. But it is certain that as a preventive of septic influences on wounds, even if it fail to destroy various kinds of germs besides the *micrococcus prodigiosus* and *staphylococcus*, nothing better has yet been discovered that can be used in every-day practice, or is more handy or more efficacious than the oil of turpentine, not excepting the 1 : 1000 solution of the bichloride of mercury.

MEDICAL PROGRESS.

The Treatment of Follicular Tonsillitis.—BOISLINIERE reports seventy-five cases of follicular tonsillitis treated with benzoate of sodium, as follows:

In treating these cases no local application whatsoever has been used—no gargle prescribed. We have simply used the following formula:

Benzoate of sodium . . .	℥j–℥iv
Glycerine,	
Elix. calisaya bark . . .	āā ℥j. M.

Sig.—One teaspoonful every hour or every two hours.

In the analysis of seventy-five cases, being the last seventy-five treated, we find that:

1. By the use of the benzoate of sodium the disease is cured in from twelve to thirty-six hours, a great gain in time, as the average duration of the disease has been heretofore from two to five days. (Mackenzie.)

Of the seventy-five cases,

41 reported well in 12 hours,
31 " " 24 "
3 " " 36 "

Average, 20 hours.

In private practice, when the cases could be watched more carefully, we have frequently seen the white cheesy points disappear in from eight to ten hours.

2. That the benzoate of sodium undoubtedly controls the febrile elements in the disease.

3. That it may be given with impunity, even to children; we have never been able to discover any bad or even disagreeable effects from its action.

4. That it is a valuable addition to the remedies used in throat affections, especially in an acute inflammatory condition of the tonsils, when applications only aggravate, and gargles increase the trouble.—*St. Louis Courier of Medicine*, February, 1888.

Tobacco Amblyopia.—From the study of forty-nine cases of this affection, BROWNE reaches the following conclusions:

1. The optic nerve resembles a sensory tract of the spinal cord, consists of two tracts, of which the central has a special affinity for tobacco, while other drugs—*e.g.*, quinine—will leave it unaffected.

2. Tobacco is the essential agent in causing an axial neuritis, which does not in ordinary cases tend to spread to the nerve-fibres coming from the peripheral retina.

3. As a rule patients apply in the early stage of neuritis, and complete recovery may be expected without any treatment except entire cessation of smoking.

4. When recovery is established, moderate smoking is not injurious.

5. Although it would be absurd to suppose tobacco is the only agent capable of causing axial neuritis, no other has yet been substantiated in a series of cases arising in strictly non-smokers.

6. Besides tobacco a special condition is required to precipitate an attack; alcohol, diabetes, excessive venery, starvation, mental shock or distress, are the most common auxiliaries.

7. In some persons a special tendency to degeneration (sclerosis or atrophy) exists hereditarily; to these tobacco is especially injurious.—*Liverpool Medico-Chirurgical Journal*, January, 1888.

A Draught to be administered in Delirium Tremens.—SAVIGNAC prescribes the following:

Gum arabic water,	
Claret	āā ℥ 15
Syrup of tolu	℥ 7½
Aqueous extract of quinquinia . .	℥ 1
Tincture of musk	♏75.

A teaspoonful hourly.—*Revue de Thérapeutique*, Feb. 1, 1888.

An Unpleasant Effect from Saccharin.—HEDLEY reports, in the *British Medical Journal* of February 11, 1888, the following case:

In a case of glycosuria I had prohibited the use of sugar, and substituted saccharin, with apparently excellent results; but after about twelve or fifteen doses had been used, my patient began to feel so much nausea that he was obliged to leave off taking it. His mouth got to have an "abominably sweet taste always in it," and, without the addition of any sweetening material, everything he touched tasted of saccharin; indeed so pronounced was this that his pipe, usually such a solace, had to be given up in disgust, on account of the smoke having such a sweet flavor.

This intensity of sweetness occurred on the fifth day after beginning the saccharin; and probably an explanation will be found in the fact that it passes unchanged through the system, and will, I am afraid, produce a sweet saliva, unless it is used with occasional intermissions.

The Toxicity of Boric Acid.—GAUCHER has made recent investigations on the extent to which boric acid may be safely administered. He estimates that to poison an adult a dose of 2⅓ ounces must be given daily for 10 days. He has used it externally, as usually done in skin diseases, with good results, and has prescribed it internally in phthisis, in doses of 8 to 15 grains daily, with advantage.

As it is eliminated by the kidneys, he suggests its internal use in cystitis, thus avoiding the irritation produced by catheterization.—*Gazette Médicale de Paris*, February 4, 1888.

Benzol in the Treatment of Whooping-cough.—MACALISTER, in the *Liverpool Medico-Chirurgical Journal* for January, 1888, reports his experience in the use of benzol in whooping-cough, as follows:

The greater number of children who came under notice had had the disease for two or three weeks, some being in the stage of full development, and a few in the stage of decline. In many of these the benzol appeared to be effective, lessening the frequency of the paroxysms, rendering them less distressing, and also perhaps hastening the time of recovery, the improvement in some cases being so marked and rapid as to leave but little doubt in my mind that it was accelerated by the remedy employed. In these cases in which the benzol was given during the first fourteen days of the "whooping" stage, one cannot with certainty say that any benefit immediately followed its use; the paroxysms were not apparently diminished in number, although perhaps they were shorter and less distressing, but in the third week and in the period of decline the drug appears to be useful.

Benzol is insoluble in water and will not mix with it even with the addition of mucilage, but if a little rectified spirit (in which it is freely soluble) be added to a thin mucilage, together with some simple syrup and a few minims of tr. chloroformi co., an excellent mixture is produced, which is readily taken by children. The dose of benzol is from ♏ij to ♏vj or more, and the formula I have used is as follows:

℞.—Benzol (pur.)	♏ij.
Sp. vini rect.,	
Tr. chloroformi co. . . .	āā ♏ijss.
Syrup. simp.	♏xx.
Mucilag.	ad. ℥j.

Dose, ℥j–℥iij, according to age.

Chloride of Methyl, Locally, as an Anæsthetic.—BAILLY has found that tampons saturated with chloride of methyl are a convenient and efficient means of producing local anæsthesia by refrigeration. He has devised a simple apparatus by which chloride of methyl may be kept in a liquid condition for several hours, transported conveniently, and applied by tampons or a brush. With suitable precaution, this method of anæsthesia may be applied to mucous membranes.—*Gazette Médicale de Paris*, February 4, 1888.

Hydrobromate of Hyoscine in Mania.—THOMPSON, in the *Lancet* of February 4, 1888, reports his use of the drug as follows:

The chemists prepared at my request a solution containing a grain in 400 minims. I fixed upon this strength, so that in the event of a moderate quantity being given in mistake for the same of a solution of morphia no particular harm would be done. The dose of this solution is from two minims (1–200th of a grain) to four minims (1–100th of a grain). As much as six minims have been given, but the patient is made so "drunk" that the smaller doses are preferred. My colleagues and I have used the new drug in many cases, but we find that while on all occasions it acts as a certain hypnotic, it is of most use in cases of chronic, and recurrently chronic, mania. The effect on the sexes is about the same. There is marked sluggishness of all motor functions, with depression of reflex activity, and dizziness, dimness of vision, an ataxic gait, and dryness of the mouth and fauces. All these symptoms are but faintly seen when only a proper medicinal dose has been given. The drug has been used here, as I have said, in very many cases, and I can say that on no occasion have we failed to produce the desired effect. The patient is quieted and falls asleep, but the sleep is not very deep of its kind, and at any stage there is no difficulty in rousing the patient to the fullest extent of wakefulness, though he soon falls asleep again. In acute mania, where much restlessness and tendency to knocking about are the chief symptoms, it acts most beneficially. The patient comes to his senses and rests quietly, and so time is gained and exhaustion avoided.

The Treatment of Bronchitis.—FERRAND has prescribed creasote as follows:

℞.—Creasote	gtt. 3.
Essent. limon.	gtt. 2.
Aquæ	gtt. 120.
Syrup. aurant. flor.	gtt. 30.

A teaspoonful of such a mixture may be taken every two or three hours.—*Journal de Méd.*, January 22, 1888.

The Effects of Strophanthus.—ROSENBUSCH, of Lemberg, concludes from his clinical studies on the use of strophanthus, that it possesses a marked influence upon the heart, increasing the force of the systole, prolonging it, raising arterial tension, and slowing heart action. It strengthens the heart muscle and regulates its action. It possesses a distinct, but very slight, diuretic power. It disturbs digestion less than the heart tonics in general use. It may be used for several weeks without symptoms of cumulation. The best form to be prescribed is simple tincture, in doses of from 10 to 25 drops three times daily.

It may be given with advantage when digitalis does not agree with the patient, and in cases of severe disturbances of compensation it may be used to maintain the effect of digitalis. The alcoholic tincture is superior to the ethereal tincture, because it contains the glucosides from the plant, while the ethereal tincture is more likely to disturb digestion.

It should not be used in stenosis of the aortic valves, because it prolongs the cardiac systole.—*Berliner klinische Wochenschrift*, February 13, 1888.

Sour Milk in Summer Diarrhœa.—The *Medical Press* of February 8, 1888, writes that the house-surgeon of the Prison Zweibrücken, DR. OSTHOFF, has in two annual reports spoken very favorably of the employment of sour, curdled milk in summer diarrhœa, in adults as well as in children. Such teaching may seem startling to the English mind, with its prejudice against using milk having about it any suspicion of sourness, and especially as an article of food for infants. It should be borne in mind, however, that England is perhaps the only country in the world in which such a foolish prejudice exists, and in which sour milk is not considered at least as wholesome as milk that is sweet. But this by the way. Dr. Osthoff endeavors to explain the beneficial action of sour milk in the following way. He believes that the bacilli of sour milk destroy and overcome, by their rapidity of growth, the other microörganisms that are the cause of the diarrhœa, and that they thus bring the process to a

standstill. In addition to its value as a dietetic agent in summer diarrhœa, it proved exceedingly useful "in all chronic abdominal affections associated with dyspepsia, in chronic intestinal and hepatic diseases with diarrhœa, or constipation, in jaundice, and as an article of diet in typhoid, pneumonia, and erysipelas. In tuberculosis of the intestines, however, it increased the diarrhœa. It forms a valuable means of support to Oertel's treatment in cardiac cases, and cases of emphysema, in small quantities as a substitute for coffee, wine, beer, and water, as a thirst-quenching drink, as well as a food containing both muscle- and fat-forming material in one and the same form. At the instance of the Bavarian ministry, Prof. von Voit worked out an official report on this sour milk therapeusis, and from this some interesting details may be extracted. Sour milk very much resembles fresh milk as a food (four per cent. albumen, three per cent. fat, four per cent. sugar). The use of it is to be recommended as an addition to the needful amount of hydrocarbons. Moreover, especially in summer, it forms a refreshing drink, and may be ordered with advantage in dyspepsia. The action of sour milk is very varied; sometimes it causes constipation, and sometimes diarrhœa. For this reason he recommends that in infantile diarrhœa it shall be used with caution. In general he recognizes the value of sour milk as an article of diet. A writer in the *Deutsche Medizinal Zeitung*, commenting on the above, draws attention to the similarity of sour milk and kefir, and let us add the imitation koumiss, now so familiar. Both are used in phthisis. Koumiss at one stage (when fresh) is known to relax the bowels, whilst at another it constipates. It is the same with kefir, and doubtless it will be the same with sour milk, as it gets older it becomes more constipating. We think Dr. Osthoff has done well in drawing attention to a neglected and very useful article of food.

Amylen Hydrate.—In the clinic of Schreiber, GÜRTLER, at Königsberg, reports his results in sixty-one cases of various conditions, in which he used amylen hydrate as a hypnotic.

The cases included alcoholism, encephalomalacia, morphiomania, epilepsy, and tuberculosis. His prescriptions were as follows:

Amylen hydrat.	grs. 105.
Aquæ dest.	ʒ 10.
Syrup of raspberries . . .	ʒ 7½.—M.

Half of this to be taken on retiring.

Or,

Amylen hydrat.	grs. 105.
Aq. menth. pip.	ʒ 10.
Syrup of raspberries . . .	ʒ 7½.
Ol. menth. pip.	gtt. 1.—M.

Half to be taken on retiring.

The dose of amylen hydrate ranged from 50 to 90 grains. Gürtler obtained less uniform results in children than in adults, with this remedy, in proportionate doses. He considers it less apt to induce cardiac failure than chloral hydrate.—*Berliner klinische Wochenschrift*, Feb. 6, 1888.

The Immediate Closure of Tracheal Wounds.—SIR WILLIAM MACCORMAC writes to the *Lancet* of February 4, 1888, his opinion on this subject as follows:

In support of your editorial remark on the advantages of immediate closure by suture of tracheal wounds, I would refer to a case published in the *Lancet* of January 2, 1886, where the blade of a broken tooth-forceps was extracted from the right bronchus. The incision in the trachea was an inch and a half long, and this I carefully closed by suture. The external wound was also closed after drainage tubes had been introduced. I am convinced this proceeding materially contributed to the successful issue of the operation, by shutting out the cold air from the lungs and preventing wound secretions entering the trachea. It will not be always desirable to close the tracheal wound, but in those instances where an operation is performed for the removal of foreign bodies from air passages, in some cases of suicidal wound, and generally where the conditions for local repair are favorable, there are obvious advantages to be gained by the immediate suture of the tracheal wound.

Children's Food in Typhoid Fever.—JACOBI, in the *Archives of Pediatrics* for February, 1888, recommends the following mode of treatment: Typhoid fever is of long duration, its temperature is sometimes quite high in children, as it is in adults. The small intestine is affected principally. Thus, not only is, after the first few days, a considerable amount of food required, but it must be so chosen as to be digestible in the stomach; its proper selection is the more important the more the latter organ is impaired by high temperatures. Beside plenty of water, or acidulated water (hydrochloric, no organic, acid), albuminoids are indicated. Milk and cereals (in decoctions, which must be strained) are the proper foods. The administration of stimulants, both as to quantity and to time, depends on the character of the individual case, and the power of resistance on the part of the patient, beside the condition of the heart. When the latter becomes feeble at an early period, beside heart-stimulants (digitalis, spartein, caffein, camphor), alcoholic stimulants are required. Diarrhœa demands (beside opium, naphthalin) albumen, rice-water, arrow-root, mutton-broth. Hemorrhage forbids food in any shape for a time, the duration of which depends on the general condition of the patient. At no time during the disease, and during the first ten days of fully established convalescence, the food must ever be solid. No vegetables must be allowed until three weeks have elapsed since the beginning of apyrexia. When the milk and cereal food become distasteful, a change in their preparation will and must suffice. The large majority of relapses are due to a dereliction in the strict rules of feeding.

An Emulsion of Terebene.—ENGLAND, in the *American Journal of Pharmacy* for February, 1888, reports the following formula:

℞.—Terebene,

Ol. gossyp. sem. . . .	āā ɱclx.
Pulv. acaciæ	ʒvj.
Pulv. sacchari	ʒij.
Aquæ q. s. fiat.	fʒiv.—M.

Dose, 1 to 2 teaspoonfuls (=10 to 20 drops).

The product is a milk-white, perfectly suspended liquid, having the odor and bitter, turpentine-like taste of terebene, and is miscible with water, without separation.

Alum in Typhoid Fever.—DR. PAOLETTI has treated sixty cases of typhoid fever, with excellent results, with crude alum alone. He remarks that this drug has formerly been used only as a styptic and an astringent, but now that its antiseptic properties have been recognized it is clearly indicated as a remedy for abnormal fermentations in the intestinal canal.—*British Medical Journal*, February 4, 1888.

A Case of Macroglossia, with Partial Resection.—TAKAKI, of Tokio, reports, in the *Sei-I-Kwai Medical Journal* for January, 1888, the following case of macroglossia, on which he operated in the Tokio Charity Hospital:

The patient, a boy, aged two years and two months, was admitted on the 18th of October, 1887, with the following history: About the 10th of August, 1887, he was taken ill with sudden rise of temperature, sleeplessness, violent screams, etc., without any known cause, so that his mother thought he had caught "cold," but soon his tongue became much enlarged, protruded from his mouth, accompanied with some pain, and, at the same time, saliva increased in quantity, moistening the parts about the mouth and the clothing and interfering with mastication.

State on admission: The nutrition fair, slightly pale. Tongue enlarged, protruding from the mouth reaching down to the chin, looking as if constricted by the lips. Generally red, epithelium off at the apex and under surface, edges blackened with dirty-looking matter, upper surface presenting much enlarged papillæ here and there with excoriations; under surface presents transverse ulceration owing to the irritation of the teeth in the lower jaw. It measures four and a half inches from one corner to the other passing over the apex along the edges. Circumference at the mouth about four inches and eight lines. Manipulation gives him no pain, the tongue lying within the mouth only slightly congested, the secretion of saliva not so great as stated at its commencement. The child was utterly unable to masticate food so that he had to be fed with liquids and comminuted articles of food; the incisors of the lower jaw project outward, but the jaw is not deformed. All the other parts of the body apparently normal; urine normal. Operation was performed on October 21st, under the influence of chloroform, by Dr. Takaki. The protruding part of the organ was removed with incisions of Λ-shape, the legs directed forward and outward to the edges, while the apex was toward the base of the tongue. Bleeding checked with torsion and wounds sewn up with six sutures. In order to prevent the retraction of the tongue within the mouth, two tough silk threads were passed on each side of the organ, their ends being held by the assistants. After the operation, the two threads were kept fixed on each cheek with adhesive plaster, the object was to pull the organ out so as to make the removal of sutures easier. A mixture of tincture of opium three minims, simple syrup half a drachm, and two drachms of water, was ordered to be given three times a day.

On the 28th of October the tongue became clean. The last suture was removed, it was purposely kept so long from fear of the wound not being able to heal as in ordinary cases, because the tissues were hardened. The wound entirely healed up, the tongue now presenting a round apex lying within the cavity of the mouth. Discharged.

Microscopic examination of the removed part corresponded with the description given by Virchow and others.

Antiseptic Tooth-washes.—At a recent meeting of the Odontological Society of Pennsylvania LEFFMANN reported his experience as follows: Several formulæ for antiseptic tooth-washes have been offered as fulfilling the indications here referred to, and, with a view of testing the practical value of these, I made up two forms, and present them for consideration by the members. In my opinion, they are both rather too strong, and can only be used very much diluted with water. This will, of course, interfere greatly with their antiseptic effect. Besides this, they are necessarily retained in the mouth for a very short period, and even if we suppose that they penetrate into all parts of supportive structures, they do not remain long enough to do any good. I give herewith the two formulæ, both of which I have used, and find the first the most agreeable:

Thymol	4 grains.
Benzoic acid	45 "
Eucalyptol	220 "
Alcohol	3 fluidounces.
Oil of wintergreen	25 drops.

Use a teaspoonful in about three tablespoonfuls of water as a wash.

Thymol	20 grains.
Alcohol	1 fluidounce.
Glycerin	1 "
Water	Enough to make 1 pint.

Use as above.—*Dental Cosmos*, February, 1888.

A Case of Idiosyncrasy Regarding Antipyrin.—STURGE reports in the *British Medical Journal* of February 4, 1888, the following interesting case of idiosyncrasy with regard to antipyrin. A member of my family liable to migraine was attacked in the ordinary way a few days ago, and I administered for the first time a dose of five grains of antipyrin in powder, with the following curious result: Five minutes after taking it, the "deadly sickness" which was previously present seemed to give way, and an "expanding sensation" was felt, rising from the stomach upward. Almost immediately she sneezed violently for about twenty times running without pause. The face and eyes became deeply suffused; tears began to flow; quantities of mucus flowed from the nose; the breathing became hard and labored, accompanied by a feeling of suffocation; there was complete inability to lie down. A violent cough shortly came on, and large quantities of mucus were expectorated; at the same time there was very profuse sweating.

After these phenomena had lasted for about half an hour, intense itching was felt on the insides of both thighs, and on examination there was found a thick outcrop of urticaria, which soon extended on to the abdomen. There was also a strong coppery taste in the mouth—not continuing, but coming on in violent bouts—and an equally strong smell of the same metallic nature, also intermittent. There was loud singing in the ears, which felt intensely congested. The pulse was quick and very full.

After the symptoms had lasted about three-quarters of an hour from the commencement, they gradually disap-

peared, some tightness of the chest and running at the nose remaining for four or five hours longer. The sickness accompanying the migraine disappeared completely as soon as the drug had begun to work; the headache also disappeared for a time, but came back slightly about four hours afterward.

Saccharine and Chartreuse.—PETIT proposes an elixir of saccharine and *la grande chartreuse*, as follows:

Chartreuse	♏ 15.
Spts. of wine	℥ 2.

Dissolve in this mixture

Saccharine	grs. 45.
Sodium bicarbonate	grs. 25.

the whole to be filtered.—*Journal de Médecine*, February 12, 1888.

Collapse Following the Use of Cocaine.—LOBKER is quoted by the *Deutsche medicinische Wochenschrift* of February 2, 1888, in his experience with five cases of severe collapse following the hypodermatic injection of a fresh five per cent. solution of cocaine beneath the periosteum of the jaw, to produce anæsthesia in minor operations, as the extraction of teeth. The quantity used was half the contents of a hypodermatic syringe. Two of the patients had valvular heart disease, and the others had some functional derangement of the sympathetic nerves. Amyl nitrite was useless as an antidote, the patients recovering spontaneously after half an hour or an hour and a half. He advises greater care in dosage, and the use of carbolic acid as a local anæsthetic when possible.

A Simple Cure for Obstinate Hiccough.—DRESCH, in the *Bulletin général de Thérapeutique* of January 30, 1888, writes that if the external auditory meati be closed by the finger-tips, and any convenient liquid be swallowed at the time in several deglutitions, obstinate hiccough will cease.

A Remarkable Aneurism.—The Vienna correspondent of the *Medical Press* of February 1, 1888, reports that DR. HOCHENEGG, Assistant to Prof. Albert, gave, before the Imperial and Royal Society of Physicians, recently, an account of a case which had special interest, not only on account of the rare malady which had been observed in it, but also because it had given origin to a diagnostic mistake. A man, æt. twenty-one, was admitted into the hospital with an abscess in the region of the left elbow-joint. The patient had, when seventeen years old, suffered from rheumatism, and acquired thus an incompetence of the mitral valve. On careful examination, a painful tumor which pulsated was found to be present in the left elbow-joint. It was therefore assumed that they had to deal with an aneurism of the ulnar artery. After temporary strappings with an Esmarch bandage and digital compression, it seemed that the aneurism underwent a spontaneous retrogressive metamorphosis, when a new pulsating tumor became visible on the left retro-malleolar region, over which the skin presented the appearance of phlegmonous inflammation. The patient suddenly died (and as it became evident at the post-mortem examination) from the bursting of an aortic aneurism. The aneurism in the pit of the elbow did not derive its origin from the ulnar artery, but in the "arteria interossea." Dr. Paltauf, Assistant to Prof. Kundrat, in the chair of pathological anatomy, illustrated this case from the etiological point of view. Several observations had already been made on this disease, and Eppinger had described seven such cases which had been observed by himself, in all of which it had been the question of multiple aneurism in the largest part of the organs, besides relapsing "endocarditis verrucosa and bacteritia" of old date. The aneurisms had, with predilection, their site in those parts in which the arteries became divided, and, according to Eppinger, they were due to local inflammation of the wall of the blood-vessels, produced by emboli from the inflamed endocardium. Also Dr. Paltauf had, during last year, observed four similar cases, and so arrived at the same conclusions. The formation of the aneurism was preceded by an inflammation of the muscular coat of the blood-vessels, owing to which the "membrana elastica" and the "membrana intima" burst, and thus gave rise to the formation of aneurism. In the thrombi which have formed, vegetations of cocci could always be found in great quantities. The tendency toward relief could, in such cases, be the most easily explained by the inflammatory change of the wall of the blood-vessels, which thus favored the formation of thrombi. In some cases miliary aneurisms in the slightest arteries could be found in an immense number.

A Useful Emulsion of Copaiba.—The *American Druggist* for February, 1888, reports the following formula:

℞.—Copaibæ	fl. ℥½.
Liq. potassæ . . .	fl. ℥1.
Spir. æther. nit.,	
Tinct. lavand. co.,	
Syrupi . . .	āā fl. ℥½.
Mucilag. dextrini . .	q. s. add fl. ℥4.

The Treatment of Chronic Pelvic Peritonitis by Chloride of Ammonium and Phosphate of Sodium.—CHÉRON has used, with good results, ammonium chloride by the mouth, as follows:

Ammon. chlorid. . . .	1 part.
Syrup. simpl.	100 parts.—M.

Sig.—From one to five teaspoonfuls daily, after meals, in water.

In addition he has employed sodium phosphate, hypodermatically:

Sodii phosphat.	℥ 1½
Sodii sulphat.	℥ 1½
Aquæ destill.	℥ 30.

This solution should be freshly made, and carefully filtered.

This fluid he has injected slowly beneath the cellular tissue of the abdomen, where he has thought that he could locate inflammatory products. He also made gentle massage over the site of injection. This treatment was repeated in six or eight days.—*Revue gén. de Clin. et de Thér.*, January 26, 1888.

Menthol Cataract.—ROGER and CHARRIN have recently observed, in animals poisoned by menthol the production of cataract. They have no explanation for the fact. It will be remembered that naphthaline has similar effects.—*Gazette Hebdomadaire*, January 27, 1888.

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SATURDAY, MARCH 3, 1888.

ANTISEPTIC IRRIGATION OF JOINTS.

IN the treatment of effusions into the joints, an examination of our text-books shows that splints, rest, extension, compression, and revulsives are the agents mainly relied upon to effect a cure, followed, in cases of serous effusions, as a last resort, by puncture and the elastic bandage, and, in pyarthrosis, by incision and drainage.

In the *Centralblatt für Chirurgie* of December 8, 1877, Rinne describes antiseptic irrigation of the joints for these lesions, and illustrates his paper by nineteen examples of washing out the knee-joint with a three or five per cent. carbolic solution, derived from the practice of Schede. The operation consists, briefly, in evacuating, under strict aseptic precautions, with a trocar or aspirating needle, the contents of the joint, distending the latter with the solution for a few times, and then by rubbing, kneading, and alternate movements of flexion and extension, the joint being half filled, bringing the fluid in contact with every portion of the synovial membrane. The washing out is continued until the fluid returns clear; a splint and the usual outer dressings are applied for six or eight days; passive motion is then instituted until two weeks, as a rule, have expired, when the patient is discharged, but enjoined to wear a flannel bandage for a few weeks. If, on removing the dressings, there is a fresh effusion, complete rest with compression is kept up for several additional days before resorting to passive motion. The cases pursued, first, an afebrile or slightly febrile course, without relapse; secondly, a moderately acute inflammation was set up, resulting in fresh effusion, which, however, rapidly disappeared; and, thirdly, in old cases with thickening of the capsule and perisynovial tissues, and stretching of the ligaments, the effusion persisted, and the operation had to be repeated.

A study of the cases shows that this simple and absolutely safe procedure should replace the other more tedious, and frequently highly unsatisfactory, method in all examples of acute, subacute, and chronic synovitis, whether serous, serofibrinous, or purulent, as well as of acute hæmarthrosis, and of tubercular inflammation in its early stage.

The paper of Rinne appears to have been either overlooked, or to have been regarded with suspicion, since we do not find that primary antiseptic flushing of the joints is even referred to in our standard surgical text-books and manuals. This is to be the more regretted, as a more extended experience has fully confirmed the results attained by Schede, and demonstrated that the operation is as harmless as that of injecting a hydrocele, and that it may, in many instances, do away with incision and drainage.

In the *Deutsche Zeitschrift für Chirurgie*, Bd. xxvii., Hefte 1 and 2, HAGER presents a large array of cases, derived mainly from the General Hospital at Hamburg, which substantiate the statements made in the preceding paragraph. Taking the knee-joint as an illustration of the practice, we glean the following pregnant facts.

Of 100 examples of ordinary dropsy, all were cured, with the exception of one occurring in a tubercular subject, and in only 4 was a repetition of the operation required. In 25 cases of an acute character, as indicated by severe pain, great tension, and, in a few, by fever, and contraction of the muscles, the duration of treatment did not exceed two weeks. In the 75 subacute or chronic cases the average time required for a cure was somewhat longer, and the treatment was supplemented, when the capsule was much thickened, by douches and energetic massage. In 4 of these cases the patients were discharged with an immovable dressing, on account of lateral mobility of the joint and a tendency to genu valgum; while in 7 forced movements were required to restore proper function. The longest duration of treatment was seven weeks.

In the 9 cases of acute and 1 of chronic hæmarthrosis, the latter being a bleeder, washing out the fluid resulted in excellent recoveries.

The operation was practised in 15 cases for suppuration. Of these 2 occurred in pregnant women, and motion was perfect; 3 resulted from rheumatism, of which 1 recovered with normal, and 2 with almost normal, movements; and 10 were due to epiphyseal osteomyelitis, of which 3 had limited motion, and 7 had ankylosis.

Fourteen joints were punctured and irrigated for tubercular inflammation. One patient recovered with normal motion, but partial ankylosis resulted in the remainder.

In addition to these examples of effusion into the knee, the statistics include many other cases in which the knee and other joints were affected, and in which the results cannot be separated. Thus, of 8 instances of acute primary suppuration of the knee and 4 of the elbow, 4 were discharged with normal joints, 2 in immovable dressings, 1 with ankylosis, and 1, a drunkard, died of delirium tremens, after incision and drainage. In 4 examples of suppuration following infectious diseases, the result was perfect in all, the knee having been affected in 2 cases, the elbow in 1, and the shoulder in 1. Of 15 cases of gonorrhœal inflammation, the joints involved being the knee in 9, in 5 of which the fluid was purulent, elbow in 2, wrist in 2, hip in 1, and shoulder in 1, motion was normal in 7, almost complete in 5, limited in 2, and abolished in 1. Finally, of the 12 cases of rheumatic synovitis, the knee being involved in 11, and the elbow in 1, motion was perfect in 9, and almost perfect in 3.

A review of the foregoing facts shows that of 168 cases of antiseptic flushing of the knee, all recovered, and that of 30 examples of purulent effusion, in only 1 did the procedure fail, thereby demonstrating that it should be employed before resorting to incision with drainage. These results are so brilliant that it is to be hoped that the treatment will be fully tested. It may be added that, in the infectious inflammations, including the gonorrhœal, a one to one thousand solution of sublimate is to be preferred to the carbolic solution.

THE USE OF METHYLAL IN DELIRIUM TREMENS.

IN the *Therapeutische Monatshefte* for February, 1888, KRAFFT-EBING, of Graz, gives brief clinical histories of twenty-one cases in which he obtained quite remarkable results from the use of methylal in delirium tremens, and nearly all of them were discharged in from two to four days entirely well. The sleeplessness, which was naturally the most prominent symptom in nearly every case, aside from the other cerebral disturbances, yielded with remarkable rapidity to the drug, and, along with the banishment of the insomnia, the terrors and nervous excitement were relieved. In every case he used the drug hypodermatically, in the dose of from seven and a half to fifteen grains dissolved in distilled water.

On the other hand, the conclusions of MAIRET and COMBEMALE are by no means so favorable, for they found that at the outset of acute mania, doses of as much as a drachm and a half or two drachms failed to quiet the patient, but later on succeeded. In the three cases in which alcoholic mania existed, the results were entirely negative. Further than this, they conclude that the drug, to be of any use, must be given in constantly increasing doses. It is proper to state, however, that Mairet and Combemale gave the drug by the stomach.

Krafft-Ebing was often forced to repeat the hypodermatic dose of the drug within a short time, but a single repetition was generally all that was needed. As the latter writer has had a much wider opportunity for using methylal than his French brethren, and as his results were so uniformly good, the drug is at least well worth trial in this class of cases by our readers.

It will be remembered that methylal is a pure somnifacient, and that it causes no secondary depression, as do morphia and chloral. When given in very large doses, it probably kills by both respiratory and cardiac failure; and very large doses are apparently necessary to cause death.

The larger doses had better not be given hypodermatically, since great pain, and even sloughs, may result. This is evidently one of the reasons for the small doses used by Krafft-Ebing.

THE story of the chrome yellow bun poisoning cases in Philadelphia is familiar to our readers through the able clinical study by Dr. David D. Stewart, which appeared in our columns last year. The Court has just tried some of the bakers, and has imposed sentences varying from six to nine months' imprisonment upon the defendants who had used chromate of lead to give an attractive color to their cakes and buns. In view of the fact that they had already suffered severely in the loss of business, and one of them in the death of his own children and in his own impaired health, and also in view of their probable ignorance of the very poisonous nature of the adulterant, the Court tem-

pered its justice with mercy. The parties who prepare and put upon the market these poisonous adulterations must, however, know full well their toxic character, and it is to be hoped that the law will hold them to a rigid accountability.

THE Loomis Laboratory of the University of the City of New York was opened for inspection by the public, on last Monday evening. The Laboratory building, situated at 410 East Twenty-sixth Street, occupies a lot thirty-five by ninety feet, and is five stories in height. The first story is devoted to physics and materia medica, the second to chemistry, the third to physiology and histology, the fourth to pathology, and the fifth to bacteriology. In addition to the facilities for the instruction of undergraduates, every convenience will be afforded to those who are interested in scientific medicine to prosecute their studies and researches. It is reported that the anonymous donor of the Laboratory proposes to endow it with a sufficient income to cover the expense of its maintenance.

THE Court of Claims, last Monday, overruled the action of the accounting officers of the Treasury in disallowing the claim of Surgeon John S. Billings, U. S. A., for mileage, while travelling in Europe under orders of the Secretary of War. The claim was for about $1500, and was disallowed on the ground that there was no legal authority for the expense. The Court held that the Secretary of War had ample authority in the premises, and that the accounting officers had no right to interfere. Judgment was given in favor of the claimant for the full amount.

AT a recent meeting of the Society of Physicians of Vienna, von Bamberger announced the payment to the Society of 12,000 florins, the legacy of the late Dr. Da Costa Alvarenga, of Lisbon. It will be remembered that the same generous donor left similar bequests to the Berlin Medical Society, and to the College of Physicians of Philadelphia. The latter society has, also, we are informed, received its legacy, amounting to over $4100.

ALTHOUGH not prevalent, except in California, this seems to be a year of wide distribution of smallpox, the disease having been reported, since January 1, 1888, in Connecticut, New York, Delaware, Ohio, Indiana, Michigan, Wisconsin, Iowa, six places in California, Tennessee, and Louisiana. Vaccination and revaccination are preventives of smallpox, and if people keep thoroughly protected in this way, no epidemic of the disease can occur. Now is the time for those who have not been vaccinated or revaccinated within the last five years to take this precaution.

THE Fourth International Otological Congress will be held in Brussels, Belgium, from September 10 to 16, 1888, immediately after the meeting of the German naturalists and physicians in Cologne, Germany.

AMONG the forty-two foreigners who received the title of Doctor of Medicine in Paris during the past year were seven Americans. The degree was given to four women, two of whom were Americans.

The number of medical students of all nationalities in Paris during the year was between 3000 and 4000. Next on the Continent comes Vienna, with 2178; Munich, 1211, and Berlin, 1140.

THE Seventh Congress of the German Society for Internal Medicine will be held at Wiesbaden, April 9–12, 1888, under the presidency of Leube.

We are requested by Dr. Pfeiffer, Permanent Secretary of the Congress, to announce the following subjects and the names of those who will preside over their discussion:

Chronic Diseases of the Heart Muscle, and their Treatment, Oertel and Lichtheim; Alcohol as a Therapeutic Agent, Binz and von Jaksch; The Prevention and Treatment of Cholera, Cantani and Pfeiffer.

Contributions are also announced from Rumpf, on Dislocated (Wandering) Heart; Unverricht, on Experiments on Respiratory Mechanism; Liebreich, subject not yet announced; Adam Kiewicz, on Multiple Degeneration of the Spinal Cord; Jaworski, on The Dietetics of Dyspepsia; Stiller, Treatment of Basedow's Disease and the Diagnosis of Kidney Tumors; Pfeiffer, on Urinary Secretion and the Solution of Uric Acid; Binswanger, The Pathogenesis of Epilepsy; Jürgensen, Cryptogenetic Septic Pyæmia.

THE Alumni Association of the Long Isiand College Hospital held its annual meeting on the 27th ult., when it was addressed by Dr. Abraham Jacobi, in a lecture upon the heart and bloodvessels of the young.

REVIEWS.

RECTAL AND ANAL SURGERY, WITH A DESCRIPTION OF THE SECRET METHODS OF THE ITINERANTS. By EDMUND ANDREWS, M.D., LL.D., Professor of Clinical Surgery in the Chicago Medical College, and E. WYLLYS ANDREWS, A.M., M.D., Surgeon to Mercy Hospital. 8vo. pp. x. 111. Chicago: W. T. Keener, 1888.

THE chief object in writing this book would appear to have been the desire to animadvert upon those peripatetic quacks who find ample reward in storming the breaches of credulous humanity. Its authors have been at the pains of examining into the secret methods of these gentlemen and mercilessly and most properly expose the very slender scientific basis upon which their treatment rests. In so doing they have supplied information which would otherwise have been inaccessible to very many of the profession.

But while the subject to which we have referred seems to be the chief one the Doctors Andrews have had in view, it is not so ostensibly, but comes out in the course of chapters which systematically treat of some diseases of the rectum. The advice contained in these chapters is always sound, although we fail to find anything particularly new or fresh in the book; it is profusely supplied with illustrations, those taken from Esmarch's work being valuable.

THE EFFICACY OF COCA ERYTHROXYLON. NOTES AND COMMENTS BY PROMINENT PHYSICIANS. 12mo. pp. 61. New York, 1888.

IN this little volume, which is issued as a supplement to his "Treatise on Coca," M. Mariani has gathered the testimony of a large number of the profession in various parts of the United States as to the therapeutic value of the preparation of the wine of coca known as "Vin Mariani." One of the secrets of the admirable character of this tonic is, that it is made with a pure, fine quality of grape wine, of M. Mariani's own production, which blends admirably with the fresh selected coca leaves, which alone are used. This brochure, we are informed, will be forwarded to any physician upon application to Mariani & Co., New York.

SOCIETY PROCEEDINGS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, February 8, 1888.

THE PRESIDENT, J. SOLIS-COHEN, M.D., IN THE CHAIR.

DR. MORDECAI PRICE reported

A CASE OF NEPHRECTOMY FOR GUNSHOT WOUNDS.

Maggie McG., of Avondale, Chester County, Pennsylvania, aged fourteen years, white, pale, anæmic girl, was accidentally shot on Wednesday, December 21, 1887, at 8 o'clock in the morning, while handling a four-barreled Sharp's pistol, 30 calibre. She had the muzzle of the pistol turned toward the right side; while attempting to raise the lock with the thumb of her left hand it slipped from her hold and fired the cartridge, which entered her body at the junction of the ninth rib with the cartilage, passed directly through the left lobe of the liver, entered the upper third of the kidney, and passing through lodged in the deep muscles of the back near the spine. When he first saw her—twenty-four hours after the accident—her condition was an exceedingly alarming one: pulse 150; temperature 103°. She had passed, soon after the accident, a large quantity of blood from the bladder. But at the time Dr. Price saw her she was not passing blood from the bladder, showing that if there was still hemorrhage it was into the peritoneal cavity, and also that the bladder was not wounded, for the urine was normal.

Symptoms of peritonitis were well marked; abdomen considerably distended. He had no difficulty in coming to a conclusion as to what was best to be done. Dr. Charles Penrose and himself at once advised the removal of the kidney. This was concurred in by Dr. Hudders and Dr. Ewing, the attending physicians. The patient was etherized and the abdomen opened. A large quantity of clotted blood was removed from the abdomen, the wound of the liver was examined, both entrance and exit. No hemorrhage was found coming from it. The abdominal incision was then enlarged, and the blood removed from the region of the right kidney, when it was plainly seen that the hemorrhage was from that organ. The kidney was examined and found to have a hole in its upper third, large enough for a finger to enter. He then made a button-hole opening through the peritoneum with scissors, introduced the finger and enlarged the opening by tearing, and without much difficulty enucleated the kidney from its bed. The ascending colon was pushed back or inward toward the spine, and the opening in the peritoneum, through which the kidney was removed, was made in such a manner that the vessels of the bowel were not disturbed. The ligaturing of the pedicle was exceedingly difficult, Dr. Penrose having to tie the ligature the full length of his hand in the peritoneal cavity. Two ligatures were applied, one through the pedicle tying it in halves, the other, a large, heavy ligature with one knot; then the kidney was cut away and the ligature tightened before making the second knot. The stump of the pedicle, or button, as it is called, to keep the ligature from slipping, had a portion of kidney structure in it. There was complete irrigation. A glass drainage tube was left in the kidney wound and the abdomen closed. The patient rallied nicely from the ether, and, on the morning of the second day, Epsom salts was given in large and repeated doses, but could not be retained. On the morning of the third day, a second attempt was made to have her bowels moved. Rochelle salts was used, followed by two or three evacuations and passage of flatus by the bowels, which gave great relief. Patient did uninterruptedly well, with temperature not over 102° up to the time (eighth day) of the removal of the glass drainage tube, when rubber drainage was substituted, and was left too long, producing quite a rise of temperature and fetid pus at the bottom of the tube, which was at once relieved by the attending physicians removing the tube and cleaning the drainage track.

On January 4th Dr. Price was telegraphed for, patient's temperature having been up to 103° the previous night. Abscess was suspected either in the liver or the muscles of the back. He met Dr. Hudders and Dr. Ewing, her attending physicians, in consultation, and found no positive indication of abscess—the girl being in a mode-

rately good condition at the time, with a slight tendency to diarrhœa—temperature 100⅘°; pulse 100. She continued to do well until the 11th of January, when Dr. Ewing wrote him. "Some new trouble seems to be developing in our patient, her temperature is 103 ⅘°, her liver is enlarged and tender; complains of pains in left side and shoulder." On the 12th there was quite a gush of pus and bile from the drainage tube opening—about two ounces—this at once relieved her of high temperature and quick pulse. She has had many changes in the last three weeks, with slight discharge of bile and pus from the drainage tube, but has constantly, but very slowly improved. Her physicians have given her every attention, and to them he was greatly indebted for the care they have given her; nothing but their interest in the case could compensate them for their labors. For the result in this case he is also greatly indebted to Dr. Charles Penrose, for assistance rendered during the operation. Length of incision six inches. Kidney removed for hemorrhage.

DR. EWING, of West Grove, had nothing to add, except that the condition of the patient is better than Dr. Price states. At the last dressing there was only a drachm of pus discharged. There is refreshing sleep; temperature is normal in the mornings, though there is a slight evening rise; appetite is good; the bowels are regular. He felt that recovery is assured. This child was on the verge of death when the operation was done—the pulse was 150; temperature 103°; the extremities were cold; the body covered with clammy perspiration. Improvement was manifest at once.

DR. J. B. ROBERTS said that while he could not speak from experience, it has occurred to him, and the same suggestion has been made by others, that the difficulty of tying the stump so far down, and behind the peritoneum, might be lessened by getting the kidney enucleated and then twisting it so as to apply torsion to all the renal vessels, veins as well as arteries. Afterward the ligature might be applied with more ease, and this whether abdominal or lumbar incision be made, though in the absence of experience he judged that it would be easier to do this with a lumbar incision. He presumed that there was no intestinal wound in this case, no mention having been made of any.

In connection with the operation by lumbar incision, he might refer to an error of his own, which illustrates the mistakes our lack of familiarity with operations in this region may lead us into. The operation was undertaken for a supposed stone in the kidney; but as no stone was found, it resolved itself into an exploratory incision and acupuncture of the kidney. The ordinary lumbar incision had been made with care, and he had come upon the kidney with ease. It was suggested that he should enlarge the wound upward and explore the upper end. A few muscular fibres stretched across the upper angle of the wound, and these he divided by a small cut, when a rush of air into the pleural cavity informed him that he had cut a small hole in the diaphragm. The accident did no harm; it was easily remedied with a few sutures; and the dyspnœa that persisted for a few days was attributed by the patient to the tightness of the abdominal bandage. He was not sufficiently familiar with operations in this region to realize to what extent the posterior attachment of the diaphragm to the vertebræ dips down here, especially when he saw, as he did, the main mass of the diaphragm bulging down as a great sheet in front of the point where he made the additional incision.

The PRESIDENT asked how Dr. Price accounted for the bile.

DR. PRICE could not say where the bile comes from, unless from the liver. The wound in the liver is about two inches from the gall-bladder. The ball took a diagonal course and came out at the margin of the liver, and then entered the kidney. He did not know what the effect of twisting the pedicle would be. He could bring the edge of the kidney within an inch of the wound. He considered the abdominal incision the proper one. In this case there were several considerations in its favor. Hemorrhage had already taken place into the peritoneal cavity; it gave the chance to examine for wounds of the liver and intestines. He found only wounds of the liver and kidney. The liver was not bleeding, and he had only the kidney to deal with. In view of the discharge of pus from the liver, he now believes that it would have been better to insert into the track of the bullet in the liver a small glass drainage tube—that of Bantock, which is of about the same diameter as the ball—and drained it. If, as has been stated to him by Dr. Wood, there has been no case of recovery from bullet-wound of the liver, we are not going to make the prognosis any worse by draining, and he thought we might make it better.

DR. FRANK WOODBURY, in connection with the case reported, briefly related the notes of

A CASE OF NEPHRECTOMY FOR PYONEPHROSIS,

performed for him by Drs. Deaver and Agnew, last year, at the German Hospital:

The woman first came to him in the spring of 1886, for vesical irritation, with bloody urine. She had had several such attacks following exposure to cold and wet some two years previously. In September of the same year there was another attack. The urine contained pus, but no blood. He washed the bladder with boric acid and alkalies, and subsequently with a weak solution of nitrate of silver. The pus continued, epithelial tube-casts appeared, and a tumor slowly developed in the right side. Dr. Deaver saw the case in consultation and concurred in the diagnosis of pyonephrosis of right side consecutive to inflammation of the bladder. Dr. Agnew saw the case on December 25th, and agreed in recommending operation. On January 10, 1887, nephrectomy was carefully and skilfully done by Drs. Deaver and Agnew. Death occurred five days later, from exhaustion.

DR. DEAVER said that the steps of the operation were lumbar incision, which exposed the kidney closely adherent to all parts, especially to the under surface of the liver and to the iliac vessels. It was distended with pus, six ounces being evacuated prior to its removal. The mass was very large, and to deliver it without wounding the peritoneum required great care. He now regretted that he extirpated, as he believed it would have been better surgery to incise the kidney, wash out the abscess cavity, insert a drainage tube, and to dress it antiseptically as in nephro-lithotomy.

Much difficulty was experienced in ligaturing the pedicle, as in Dr. Price's case. He believed the abdominal incision to be preferable in dealing with greatly enlarged kidneys. In performing the abdominal operation,

the mesocolon descending, instead of the internal mesocolon, which carries all the bloodvessels, should be divided, thus avoiding the danger of gangrene of the gut. Delivery is easier, and better access is given to the adhesions, especially those to the iliac vessels.

DR. J. B. ROBERTS said that the case of Dr. Woodbury suggests some studies he made and reported to the American Surgical Association a few years ago. Something can be gained in the way of diagnosis in the early stages of perinephritic abscess and other lesions in this region by the study of certain trains of symptoms, pointing to the localization of the disease. Inflammatory affections about the upper end of the kidney, for example, will often show on careful examination a limited pleuritis; when the lower part is involved, there is apt to be spasm of the psoas muscle with flexion of the thigh; in the middle part, pressure on the renal vein and other vessels may cause an otherwise inexplicable albuminuria.

DR. PENROSE reported a case of

OBSTRUCTION OF THE BOWEL BY CANCEROUS MASS; OPERATION; WITH FORMATION OF ARTIFICIAL ANUS.

The operation was performed seven days ago. There had been complete obstruction of the bowel for twenty-eight days prior to operation. Fecal vomiting occurred two days before operation. At time of operation there was immense abdominal distention, a temperature of 101°, and a pulse of 150. An abdominal incision four inches in length was made, revealing complete occlusion of the descending colon by a cancerous mass twelve inches long, involving also the meso-colon.

Resection was made of the gut and meso-colon, and all indurated tissues were removed. The two ends of the divided gut were brought together laterally and united to each other, and the long axis of the abdominal incision, with continued suture, so as to make an artificial anus. A bucketful of fluid feces was discharged immediately after the operation. Relief was immediate; quiet sleep lasted for thirty-six hours. At present the abdomen is flat; the pulse is 80 to 90; temperature 99°; there is no pain; the tongue is clean; appetite good, and the patient doing remarkably well.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON OBSTETRICS AND GYNECOLOGY.

JOSEPH E. JANVRIN, M.D., CHAIRMAN.

Stated Meeting, February 23, 1888.

DR. H. J. GARRIGUES read a

REPORT OF CASES OF LAPAROTOMY FOR RUPTURED UTERUS.

(See page 225.)

DR. ROBERT A. MURRAY read a paper on

THE INDICATIONS FOR THE USE OF THE INTRA-UTERINE DOUCHE AFTER PARTURITION.

He commenced by giving a report of a case which he was summoned to see in consultation in a neighboring city, in which there was a febrile condition, believed by the physician in charge to be of malarial origin. He found the patient almost in a state of collapse. The temperature was 104½°, the pulse 130, the face pinched, and the lochia scanty and fetid. There were intense headache, considerable abdominal pain, marked tympanites, and a tendency to delirium. On making an examination he ascertained that there were septic endometritis and peritonitis present. The vulva was swollen, the cervix uteri badly lacerated, and the perineum partially ruptured; and in the interior of the uterus he found portions of the placenta adherent. Against the advice of the attending physician he made first a vaginal injection, and then removed the adherent placenta, and used the intra-uterine douche. This was followed by an almost immediate reduction of the temperature. Reaction was slight, and in four weeks the patient was restored to health. The physician thought that the powers of nature were sufficient to deal with the retained placenta; but Dr. Murray felt confident that if this had not been removed, and the mode of procedure mentioned not adopted, the patient would undoubtedly have succumbed to the septicæmia from which she was suffering when he was called in. He said that he mentioned the case as an illustration of the prejudice that still existed in the minds of many medical men against the use of the intra-uterine douche.

He then went on to speak of the indications for the employment of this measure, and first in the way of prophylaxis. Even in cases of non-instrumental labor it is sometimes called for if the labor has been tedious. Such long labors are frequently followed by fever, and if the os is found to be patulous, and the finger after being withdrawn from the uterus has a necrotic odor, even although no remains of placenta or membranes, or no clots can be detected, the use of the intra-uterine douche is indicated at least once. It not only has the effect of closing the vessels by the stimulating effect of the hot water employed, but also prevents septic absorption. It should also be resorted to when instruments have been used, or the hand introduced into the uterus for turning, etc., in cases of placenta prævia, and in rupture of the uterus. Also in those cases in which the patient has a chill during confinement; this chill being the precursor of fever.

In the treatment of many cases of puerperal fever it constitutes the most valuable agency at the command of the accoucheur. All cases of fever depend on septic absorption, and the uterus should be thoroughly explored for clots or adherent tufts of placenta. Especially should such exploration be made if the lochia are fetid. In many cases, however, there is no fetor about them, owing, no doubt, to the effect of the antiseptics used. In all such cases a careful examination of the uterine cavity should be made, in order to show that no source of sepsis remains within it. In the treatment of abortion, and after the induction of premature labor, the intra-uterine douche is also often of much service.

The only articles needed for carrying out the treatment are a fountain syringe with a long rubber tube attached, one intra-uterine glass tube (the Chamberlain tube is the one preferred by Dr. Murray), a rubber blanket, a thermometer to gauge the temperature of the water, a rubber cloth to protect the bed, etc., a Thomas blunt curette, and a placenta forceps, the Simpson forceps being the one preferred. The patient is gently moved (not lifted) to the side or foot of the bed, and placed in the lithotomy position, with the rubber cloth around her waist, and a blanket over her. The intra-uterine tube is guided by two fingers, and the vagina first washed out. When the cavity of the uterus is injected an assistant should

keep the organ contracted with his hand, but should be careful not to press the organ downward. The flow is to be continued until the returning fluid is entirely devoid of odor or color. The solutions which Dr. Murray generally employs are carbolic acid, 2 to 100, or bichloride of mercury, 1 to 3000 or 5000.

He next spoke of some of the objections which have been urged against the use of the intra-uterine douche, such as the danger of causing shock and collapse, peritonitis, hemorrhage, the formation of clots, and resulting embolism, of wounding the endometrium, of introducing septic matter into the uterus, of the entrance of air into veins, and of poisoning the general system by the absorption of the antiseptics used. The endometrium, he said, will not be wounded if the douche is properly managed; and shock, collapse, and peritonitis may be avoided if the uterus is firmly grasped by the assistant. The majority, if not all, of the cases of this kind reported have been those in which iron has been used as the styptic. Entrance of air into the veins can be prevented by keeping a continuous flow from the syringe, and the hot water of the douche itself acts as a strong preventive of hemorrhage by exciting uterine contractions. Dr. Murray also recommends that ergot should be administered after the douche, by way of precaution against hemorrhage.

The intrauterine douche is by no means to be employed in every case of midwifery, but only in the limited number embraced in the class of cases above referred to. Finally, the physician should always administer the douche himself, and never permit it to be given by the nurse.

DR. ANDREW F. CURRIER said that he thought none of those present would deny that the development of the antiseptic theory has forever done away with the idea that nature will successfully take care of those cases of sepsis arising from retained portions of the placenta, membranes, etc. At the same time experience has taught us the necessity of proceeding with great caution in such cases, and the applications required should be made in such a way that the danger of the procedure may be almost wholly removed.

Dr. Currier said that, in general, his rule is to use a vaginal douche if the uterus contracts readily, and then to apply a Garrigues antiseptic pad, which he has usually found to act very satisfactorily. If afterward, however, a high temperature, and other indications of sepsis show themselves, he resorts to the intra-uterine douche. He had found the Chamberlain tube excellent, and the only improvement that he had to suggest in regard to it was that it should be made of some flexible material, instead of glass. In some of the more serious cases he would advise that the tube should be allowed to remain in the uterine cavity until all evidences of sepsis have passed away, as it affords a valuable means of drainage. In a case of retained menses, in which the Chairman of the Section, Dr. Janvrin, was called in consultation, this plan had been pursued with excellent results. It is much more convenient simply to adjust the rubber tubing to the intra-uterine tube from time to time, than to have to reintroduce the latter. He has also found this method of great value in some cases of abortion.

DR. H. J. BOLDT spoke of the position of the patient during the administration of the douche. While that recommended by Dr. Murray is entirely unobjectionable if but a single injection is to be given, he thought that if the douche is to be repeated, some other is preferable. His method is to allow the patient to remain in the ordinary position on the back in bed, and to place under her an ordinary bed-pan or a douche pan. The rubber tube is passed through the handle of the bed-pan, and instead of the Chamberlain intra-uterine tube he employs a gutta-percha male catheter of large size, to which the rubber tubing is attached. By this means constant irrigation of the cavity of the uterus can be maintained as long as is desired. Dr. Boldt does not use either carbolic acid or bichloride solution, but simply hot water, of a temperature of 110° or 112°, and he thinks this decidedly preferable for constant irrigation. Such irrigation has this advantage, that it can be carried on for an indefinite period without the presence of the physician being necessary after the douche is once commenced.

He then went on to say that he employs the intra-uterine douche in every case in which he is called in consultation where he finds that the attending physician has made use of no antiseptic precautions during the labor, and in such cases, where only one injection is made, he prefers bichloride of mercury solution as the fluid. It was surprising, he thought, that notwithstanding all that has been said and written of the advantage of antiseptics in midwifery practice, so many physicians still persist in attending their confinement cases without employing them, even when instrumental delivery or operative procedures are resorted to.

DR. MALCOLM MCLEAN called attention to what he considered a serious defect in many of the Chamberlain tubes that are sold in the shops, viz., that the orifices for the passage of the fluid injected extend for a distance of six inches or more from the extremity of the tube. When this is the case a considerable portion of the fluid is apt to escape into the vagina, and the results are very unsatisfactory. It is important to see, therefore, that the holes are all within two inches of the extremity of the tube.

DR. A. PALMER DUDLEY spoke of the value of ergot in the prevention of sepsis, and said that he thought Dr. Murray made a mistake in postponing its administration until after the use of the intra-uterine douche, sepsis having already occurred, instead of giving it before any such condition had arisen. Dr. Murray had referred to the necessity of making pressure upon the uterus to prevent distention of the organ while the injection was being made; but he believed that if the uterus from the first was properly contracted there was very little danger of sepsis. He always made it a routine practice to administer one or two drachms of the fluid extract of ergot after the birth of the child in every case of midwifery that he attended.

In regard to antiseptics Dr. Dudley said that he did not now have as high an opinion of their value as formerly, and it is a fact that many of those who practise abdominal surgery have entirely discarded them, and yet have as good results as their confrères who still employ them. In the intra-uterine douche he believed that boiled water of a temperature of 110° is all that is necessary. Both carbolic acid and bichloride solutions, if used in sufficient strength to be of any value as germicides, are irritants, and he thought that we are coming to realize that if we exercise proper care in our cases, and do not bring dirty hands or dirty instruments

in contact with the patient, there will be very little use for the intra-uterine douche.

DR. GARRIGUES said that in most points he was in entire accord with the author of the paper. After a very considerable experience with both carbolic acid and bichloride of mercury, he very decidedly preferred the latter as an antiseptic. As to the danger of poisoning by the chloride, he had never met with a single case in which there was any untoward result from its use, and he believed that in the cases of poisoning reported by others, either a very strong bichloride solution or an immense quantity of fluid was employed. He is in the habit of using a solution of the strength of 1 to 4000, but one even so weak as 1 to 10,000 has very decided germicidal properties. As a rule, it is advisable to use a rather stronger solution in hospital than in private practice. He did not think there is the slightest danger attending the employment of the bichloride, provided that a strength of 1 to 4000 is not exceeded and that too large a quantity of the solution is not used. The amount should never be greater than three pints, and in the majority of instances one quart is sufficient.

He had found that it is not necessary to repeat the douche so often if after giving the injection an iodoform pencil containing ninety grains of the drug is inserted into the uterus, and since using such pencils he had found that only one douche is required in the twenty-four hours. It is important that the patient should always be on the back when the douche is used, since if she lies upon the side there is danger that some of the fluid may by means of a dilated Fallopian tube get into the peritoneal cavity. In order to get rid of the superfluous amount of bichloride solution the uterus ought always to be squeezed after the injection has been made. It is not necessary that the intra-uterine douche should be resorted to in every case of fetid lochia, as it may be found on examination that the source of the fetid condition is in the vagina.

DR. PAUL F. MUNDÉ said that for some years past he had had very decided convictions as to the circumstances in which the intra-uterine douche should and should not be employed. If, on being called to any puerperal case in which there was an offensive discharge associated with a rise in temperature, he was not satisfied with inspecting the vulva and vagina, but proceeded to insert his finger into the uterus, when he was almost sure to find a portion of retained placenta or some putrid blood-clots, he removed these with the finger or blunt curette, and then thoroughly scraped the uterine walls; after which he proceeded to irrigate the cavity. For this purpose he uses either the Chamberlain glass tube, large or small size, or, what is perhaps better, the recurrent catheter of Fritsch, and the fluid that he injects through it is either lukewarm carbolic acid solution, one to two per cent., or simple warm water.

Bichloride of mercury solution, in any strength, except so weak as to be of mythical value, Dr. Mundé considered entirely inadmissible, on account of the risk involved. The number of deaths by mercurial poisoning from the use of the bichloride in this way has now become so large that the danger can no longer be disregarded. Only recently a case has been reported in Germany in which a fatal result has occurred from the use, but once or twice, of an intra-uterine injection of a bichloride solution of the strength of 1 to 4000. Furthermore, he did not believe that such a solution within the uterus is of any antiseptic value whatever. By the time that it comes in contact with the uterine walls septic matter has already been absorbed, and the process of infection has gone too far to be interfered with by any such local application.

If nothing is found in the uterus on exploring its cavity with the finger, it is well to give a single intra-uterine douche; but it is useless, and may give rise to serious trouble, to go on with the douche afteward in such cases. If there is a hemorrhagic tendency, Dr. Mundé is in the habit of employing an injection of equal parts of hot vinegar and water; and after any injection he always squeezes the uterus dry in order to secure proper contraction of the organ. He then spoke of the danger of causing signs of collapse by repeating the douche, and said that if there were no indications of its repetition, this should by all means be avoided. There is also the possible danger of injecting air into the veins. He had seen the use of the douche persisted in even in cases where there was such trouble as localized peritonitis or cellulitis, which constitute a positive contra-indication to this measure. The mere rise of temperature or the occurrence of fetid lochia is not, as a rule, sufficient to call for the intra-uterine douche, but if both these conditions are present, it should be given at least once. In conclusion, Dr. Mundé said that he could not see any possible advantage in the iodoform pencils advocated by Dr. Garrigues, and especially since it is somewhat problematical in the light of recent investigations whether iodoform is an antiseptic agent at all.

DR. MURRAY, in closing the discussion, said that the dangers referred to by Dr. Mundé are principally liable to be met with where the intra-uterine injections are made late. He believed with him that the diagnosis should always be made, if possible, with the finger; but if on withdrawing the finger it is found to have a necrotic odor, indicating dead tissue, even though no clots or remains of placenta or membranes can be detected, he thought that the intra-uterine douche should be resorted to. A patulous condition of the os and a necrotic odor may, in general, be stated to constitute the indications for the injection.

He doubted whether hot water alone is sufficient. He believed in the cleansing properties of antiseptics; but, more than that, they destroy tissue which left undisturbed would become septic. It is in this way that they tend to prevent further absorption of septic material in cases where the system has already, to some extent, become infected. In his opinion, therefore, the use of the bichloride of mercury is sometimes essential.

In regard to ergot, Dr. Murray said that, like Dr. Dudley, he gives it as a routine practice in every case of midwifery that he attends; but the closing of the mouths of the uterine vessels, just after the birth of the child, will not prevent their relaxing afterward.

CORRESPONDENCE.

PRESERVATION OF SEVERED DIGITS.

To the Editor of THE MEDICAL NEWS,

SIR: Under this caption Dr. W. A. Miner (*The International Journal of Surgery and Antiseptics*) calls attention to the importance of the preservation of crushed or severed digits. "Since it is the routine practice of many doctors to snip off a partially severed finger, or

remove one if badly crushed, without making an effort to save it, any facts that will aid us in our attempts to prevent such a loss should be carefully studied. Especially is this the case since there have been published within a year, some half dozen cases of digits severed and afterward reunited. That there have been some failures, counts for nothing. There have certainly been no reports of any unpleasant results following the attempt. The public, too, are beginning to realize that the useful little member is sometimes needlessly sacrificed. Another case can be added to those already published which presents one unusual feature—the long time that elapsed before the severed end was adjusted to the stump." "A boy while splitting wood, cut off part of his right thumb. It dropped to the ground and he ran into the house. The mother hunted up the father, who came to the barn, harnessed the horses, wrapped the piece of thumb and the stump up in a rag, and drove nearly three miles to the doctor. Fully an hour and a half elapsed before I saw him. I removed the bandage and found the thumb lying loosely in the bandage and covered with sand and dirt. I washed it off and secured it to the stump. It united promptly, and two years afterward it would have been hard to tell which thumb had been injured."

I wish to add another case which I think is equally remarkable. Twenty-four years ago while playing with my cousin—a girl eight years of age—I had the misfortune to cut off the end of her finger. We were playing with a hay-cutter, I was turning the crank and she was pushing in the hay. She pushed her hand a little too far, and the result was she lost a portion of her second finger. It was taken off smoothly just back of the nail. We both ran to the house, where the wounded finger was hurriedly dressed, and I was despatched for the doctor, who lived over a mile away. He happened to be at home, and we returned as soon as possible, but it was more than an hour from the time the accident occurred before he arrived at the house. At the earnest solicitation of my mother, and as he said against his better judgment, he finally consented to attempt to secure the severed piece to the stump. He disclaimed all responsibility in the case, however, and said it was worse than useless, as it would surely mortify, as it had been severed so long, and was stone-cold and blue. He also feared blood-poisoning.

Suffice it to say that it united promptly—that is, the bone did, the flesh on the under side of the finger sloughed off, but afterward filled in nicely by granulation. The nail also sloughed away, and a new nail formed, and two years afterward no one could tell from the dorsal surface which finger had been injured. On the palmar surface there was a well-marked cicatrix running around the end of the finger, and it seemed to taper a little more than the corresponding finger on the other hand. As this was her right hand, it was extremely fortunate that the attempt was made to save the severed piece. She never experienced the slightest difficulty in playing the piano, which made a pretty good test as to the usefulness of the finger.

C. L. DODGE.

KINGSTON, N. Y., Feb. 25, 1888.

NEWS ITEMS.

The Case of His Imperial Highness, the Crown Prince of Germany.—SIR MORELL MACKENZIE forwards to the London weeklies of February 18, 1888, the following statement:

His Imperial Highness, the Crown Prince of Germany, having expressed his wish that I should now place on record my opinion of his case, the opportunity is afforded of correcting some of the statements which, from time to time, have been inaccurately attributed to me.

The general idea is that I am of opinion that the disease from which His Imperial Highness is suffering is not cancer;[1] the view on the other hand, which I have consistently maintained is, that there never has been any proof of the existence of cancer.

To enter more in detail: When I arrived in Berlin, last May, I stated to my colleagues that, in my opinion, the appearances seen in the throat were of a negative character—that is to say, that the disease might be either benign or malignant, and that its nature could only be determined by microscopical examination. A portion of the diseased tissue having been taken away by me from the throat of His Imperial Highness, it was submitted to Professor Virchow, who could not detect in it anything of a malignant nature. Repeated examinations by Professor Virchow of other portions removed by me yielded similar results.

In the month of July, whilst His Imperial Highness was staying in the Isle of Wight, I pointed out to more than one of his august relatives that the danger that I most dreaded was the occurrence of perichondritis at a future date, and three months later this fear was proved to be well grounded. At the end of October and early part of November, entirely fresh symptoms appeared, and at that time the local disease presented an appearance which was consistent with the diagnosis of cancer. It was then impossible to obtain any fresh microscopical evidence in the matter, and I considered it safer accordingly to treat the case as one of a malignant nature; at the same time, however, I drew up and submitted to my colleagues a *protocol*, in which I stated that although the disease at that moment looked like cancer, I could not agree that the malady was proved to be malignant until a further microscopical examination had been made. The document in which I set forth my views was forwarded to Berlin to be placed in the State Archives. Although the unfavorable symptoms then present were explicable on the ground of the existence of cancer, yet it was clear to the majority of the physicians at that time in attendance that perichondritis had supervened.

In the middle of December, however, the unfavorable signs had passed away, and there were no longer any clinical symptoms of cancer. Microscopical evidence on the subject was, however, still wanting. This was furnished at the end of January, when a slough was expectorated from the very spot which had presented such a highly suspicious appearance in November. This slough was most carefully and repeatedly examined by Professor Virchow, and the result (which is now published) again shows that cancer could not be detected.

To recapitulate: In my opinion the clinical symptoms have always been entirely compatible with non-malignant disease, and the microscopical signs have been in harmony with this view. I need only add that although in nearly every case of laryngeal disease it is possible at

[1] In this statement the words "cancer," "cancerous," and "malignant," are used synonymously.

the first inspection to form an accurate opinion as to the nature of the disease presenting itself, yet, in a few rare instances, the progress of the complaint alone permits its character to be determined. Unfortunately, the case of His Imperial Highness is among the latter number, and at this moment medical science does not permit me to affirm that any other disease is present than chronic interstitial inflammation of the larynx combined with perichondritis.

The Lancet, in commenting on the above, says that it amounts to this, that Sir Morell Mackenzie sees no absolute proof that the disease is malignant or cancerous in nature. What all Europe is anxious to know is, whether Sir Morell Mackenzie and the eminent German doctors associated with him can find proof that the disease is certainly not cancer, and this knowledge appears, for the present at least, to be unattainable. One of the most painful circumstances in the case has been the uncertainty as to the diagnosis ever since May last. And now, after nine months, the same uncertainty continues. We would gladly, if we could, read Sir Morell Mackenzie's statement in another sense; but it is very precise and clear, and it is impossible to find in it anything that implies that in his opinion the disease is certainly not cancer. The only consolation to be derived from this latest report is the very small one that the opinion is, at any rate, less unfavorable than if it had been a confirmation of the diagnosis of cancer. Professor Virchow's report is purely negative, and the material submitted to him was evidently incapable of throwing any light upon the nature of the disease.

A Babies' Hospital a Nuisance.—Suit has been brought in New York City to put an end to the maintenance of a babies' hospital in a residential quarter, on the ground that it is a nuisance and dangerous to the health of the neighborhood.

Precautions to be taken when Attending Smallpox Patients.—The Iowa State Board of Health publishes the following directions, in its bulletin for February, 1888:

Several physicians have asked us what are the best means of protecting themselves—their person and clothing, when they are called upon to attend cases of smallpox, so that without risk of carrying the disease, and infecting others, they may continue their general practice.

The following plan we believe to be perfectly safe: There should be worn a loose gown of glazed muslin, long enough to cover the feet, buttoning closely at the neck and wrists, and having a waistband; the head—all the hair, if possible—covered by a cap of like material. This should be put on out-of-doors and taken off on returning from the house. After removing the cap and gown, the hands, face, and all the exposed parts of the body should be washed well in soap and water and then rubbed freely with a weak solution of corrosive sublimate, the best germicide known. Physicians should not be expected to make unnecessary visits, as usually with good nursing and care, but little medicine will be required. Wearing apparel, such as coat, vest, and pants, that cannot well be washed or boiled, can be thoroughly disinfected by steam, hot air (212° F.), or by sprinkling them and pressing them slowly and thoroughly with a flat-iron as hot as can be used without burning the goods. But little confidence can be put in sulphur fumigations.

The Age of University Professors.—A movement is on foot in Paris to enact a limit of age for University professors. Sixty-five is suggested as a suitable age for superannuation for all future professors, and seventy for those at present in office.—*Medical Press.*

The Domestic Use of Saccharine.—A correspondent writing in the *Scientific American* of February 18, 1888, relates his experience in using saccharine as follows:

Sugar being a prohibited article to me, I naturally became interested in Fahlberg's "saccharine," and obtaining a supply as soon as possible, began experimenting with it. Using it alone to sweeten lemon juice or stewed cranberries, I found it very difficult to mix, and tried various dodges to remedy it, all of which had some drawback or other until I thought of dissolving it in glycerine.

I found that for general purposes the formula of glycerine one pound, saccharine one drachm, heated to solution, was the best. Two teaspoonfuls of above to the juice of one lemon made up to eight fluidounces make a lemonade sweet enough for almost any one, and three teaspoonfuls to four ounces of stewed cranberries make a dish "fit for a king."

I gave a sample of the above to a gentleman to whom sugar was tabooed, and who was then using saccharine alone, and asked him to try it with cranberries and report. When next seen he said very enthusiastically, "That's splendid. I've bought a barrel of cranberries, and would not go back to sugar if I could."

The advantages of the mixture over pure saccharine are: That the glycerine gives it a body, and the mixture very closely resembles in taste and appearance the best white honey; that it dissolves readily in water, milk, tea, and coffee, wines and liquors; and that it can be very readily measured.

The Ownership of Prescriptions.—The *American Druggist* discusses this question as follows:

So far as we know, the ownership of a physician's prescription has been brought before the courts, heretofore, only in a one-sided way, and has not been argued from the standpoint of special agreement or contract. It is usually supposed that when a patient calls upon a physician for advice, the advice constitutes the commodity which the physician has to sell for the time being, and that, if he writes a prescription and delivers it to the patient, receiving his fee, the commercial transaction is completed. In other words, it is supposed that the advice, including the prescription, are tantamount to a bona fide sale on the part of the physician, and to a bona fide purchase on the part of the patient, so that the latter may be regarded as the owner in fee simple of the prescription. But a sale or purchase may be regarded, or, rather, should be regarded, as a form of contract, entailing certain obligations upon both parties. When there are no conditions surrounding the exchange of the commodities, except the act of handing over the consideration, the transaction is absolutely completed and the contract fulfilled, as soon as the consideration is paid. But if the sale is made under certain conditions, accepted by the purchaser, the case assumes an entirely different aspect. We hold that if a physician expressly writes upon a prescription: "This prescription is intended for a special case and occasion and is not to be repeated"—or words

to this effect—and if the client accepts the prescription with this condition, then the latter is bound to abide by he condition. We believe, if a case of this kind were properly argued before the courts, it would be decided as we have outlined. But such a decision would hardly be of much practical value, because all that would be needed to evade the condition would be for the client to copy the prescription with omission of the prescriber's name and all details which might show that it was intended for a special case and occasion. Since any one may combine medicines in any manner, or shape, and several prescribers often happen to combine the same ingredients in the same proportions, it would be impossible for the original prescriber to identify—in a legal sense—his own prescription which he had given or sold to his patient conditionally.

Practically, therefore, even the acknowledged or assumed right of the physician to limit the use of any of his prescriptions to a particular case or time, could be easily circumvented, unless laws should be enacted which would clearly define the rights of prescriber and client.

Shakespeare's Medical Friend.—The *Medical Standard* for February, 1888, in reply to a question as to who this privileged person was, states that as the matter is of some general interest the epitaph on the tombstone in the Virginian church-yard may be cited: "Here lies the body of Edward Heldon, Practitioner in Physick and Chirurgery. Born in Bedfordshire, England, in the year of our Lord 1542. He was a friend and one of the pall-bearers of William Shakespere, of the Avon. After a brief illness his spirit ascended in the year of our Lord 1618, aged 76." It is sufficiently evident from this epitaph, and his daughter's marriage to Dr. Hall, that Shakespeare mingled in medical society.

A Simple Diagnostic Test for Ovarian and Ascitic Fluid.—Prof. Mayet advocates the use of sulphate of magnesium in order to distinguish between ascitic liquid and that from an ovarian cyst. If it be added in excess to the former, a precipitate is formed of paraglobulin and fibrinogen. In the latter no precipitate occurs.—*Medical Press.*

"Tempus Edax Rerum" for Hypochondriasis.—A case not less instructive than amusing is, the London correspondent of the *Irish Times* says, about to come to legal issue in London before long. Two years ago a London doctor had on his list of patients a lady long suffering from an affection of the face and jaw, which baffled the arts of the faculty. She changed her residence from London to a provincial town, but kept herself in the hands of her London doctor by letter. Finding the ailment obstinate, and the patient somewhat hypochondriacal, the doctor wrote in the end, saying he had exhausted his resources, and adding his opinion that *Tempus edax rerum* was the only remedy. Straightway the lady hied herself off to a local chemist, and applied for the specific as set forth in the letter. The attendant, it will be contended, through deliberate dishonesty, made up a bottle for which he charged 7s. 6d., and at the patient's request registered her name as a customer to whom the remedy was to be regularly supplied. She continued using and paying for the sham medicine for over a year and a half. Coming to London for the Jubilee, she chanced to meet her former doctor, who was astonished to find himself gratefully thanked for his invaluable prescription. He wrote at once for an explanation, and the next stage of the business began with the disappearance of the assistant, and the denial of any responsibility of the chemist, but, nevertheless, the case stands for trial. The plaintiff has, it seems, been an invalid from her twentieth year, and has paid for medicine alone over £2000.

A Beautiful Clinical Case of Glanders.—The *Medical Press* reports that a curious case put the diagnostic ability of a well-known French therapeutist to the test on a recent occasion. The patient was a working saddler, who presented a number of small, superficial abscesses in different parts of his body, the secretions from which, under the microscope, showed the presence of the characteristic bacillus of glanders. After due consideration, the patient was pronounced to be suffering from farcy, and was exhibited at the Hospitals Medical Society of Paris, as such. Certain members having expressed a doubt as to the accuracy of the diagnosis, some experimental inoculations were made with matter taken from one of the sores, but without any result. Ultimately it was discovered that the man was a confirmed morphiomaniac, taking from six to eight hypodermatic injections daily. The abscesses were caused by a want of cleanliness, and by too superficial injections. What a magnificent case for the clinical examination of students!

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY, FROM FEBRUARY 14 TO FEBRUARY 27, 1888.

ARTHUR, WILLIAM H., *Captain and Assistant Surgeon.*—Leave of absence extended two months.—*S. O. 35, A. G. O.*, February 13, 1888.

VOLLUM, EDWARD P, *Lieutenant Colonel and Surgeon.*—Granted leave of absence for four months, with permission to go beyond sea and to apply for an extension of two months.—*S. O. 41, A. G. O.*, February 20, 1888.

GARDNER, E. F., *Captain and Assistant Surgeon.*—Granted leave of absence for one month and twenty-one days.—*S. O. 41, A. G. O.*, February 20, 1888.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE-HOSPITAL SERVICE, FOR THE WEEK ENDING FEBRUARY 25, 1888.

WILLIAMS, L. L., *Passed Assistant Surgeon.*—Promoted and appointed Passed Assistant Surgeon from Feb. 10, 1888. Feb. 23, 1888

COBB, J. O., *Assistant Surgeon.*—Appointed an Assistant Surgeon, Feb. 21, 1888. Assigned to duty at Marine Hospital, Chicago, Illinois, Feb. 25, 1888.

STONER, J. B., *Assistant Surgeon.*—Appointed an Assistant Surgeon, Feb. 21. 1888. Assigned to duty at Marine Hospital, New York City, Feb. 23, 1888.

CONDICT, A. W., *Assistant Surgeon.*—Appointed an Assistant Surgeon, Feb. 21, 1888. Assigned to duty at Marine Hospital, Chicago, Illinois, Feb. 23, 1888.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

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